

consultant

December 1961

Included in this issue:

Mental Illness: Recognition and Referral

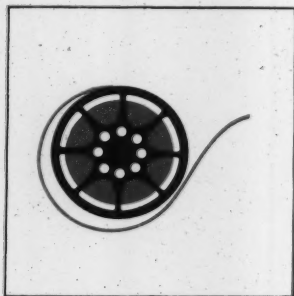
A Simple Method for Treating Stasis Ulcers

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CORRESPONDENCE

CONSULTANT welcomes questions and comments about any of the topics covered. The authors will answer all questions by mail, and some of the most informative replies will be published in this section (names will be withheld on request). Please address all correspondence to CONSULTANT, SK&F Laboratories, 1500 Spring Garden Street, Philadelphia 1, Pa.

Bad Breath from "Black Hairy Tongue"

(Consultant, October '61)

Dear Doctor Seltzer:

The condition of "black hairy tongue" associated with a decomposition odor in one of my patients had failed to respond to treatment. Is there an effective therapy for this distressing condition?

— Melvin Klein, M.D.
Coral Gables, Florida

The condition is rather rare, but is not considered serious. The "hairy" appearance is due to hypertrophied filiform papillae projecting from the dorsum of the tongue. No relationship is known to exist between this condition and cancer, or any disease, though it often occurs in people who have poor oral hygiene and who are heavy smokers or tobacco chewers. The papillae may become blackened by pigment from tobacco or coffee. Drugs have been suspected as causal agents, since hairy tongue has been known to occur in patients receiving antibiotics or phenothiazines, but since it also occurs in people not receiving drugs, this may be coincidental. The odor you mention undoubtedly comes from decomposition of food particles trapped in the papillae. The best solution to the problem is good oral hygiene. An effective measure is to scrub the area with a toothbrush dipped in hydrogen peroxide, and then rinse the mouth and gargle with a 50% solution of hydrogen peroxide. When very long, the papillae can be cut off with a pair of long-handled, curved scissors, but there may be bleeding if they are cut too close to the tongue.

— Albert P. Seltzer, M.D.

More about Pregnancy in Double Cervix and Uterus

(Consultant, October '61)

Dear Doctor Mengert:

I saw your letter to Dr. Kurth and thought you might be interested in two cases I have had.

Case 1—Double vagina (septum), double uterine cervix (septum), complete with one corpus. Spontaneous labor at 8 months with dystocia from opposite cervix. A live baby was delivered by Cesarean section and the uterine septum was removed. A subsequent

pregnancy was delivered at full term, again by Cesarean section.

Case 2—Double cervix, double vagina—5 or 6 spontaneous abortions at 2½ to 3 months. Septum removed from vagina; uterine septum removed at hysterotomy. Delivered a live baby one year later by Cesarean section.

I had not realized actually that this was as rare as it is. Incidentally, both women were Rh negative. Case two was AB negative.

— Dale R. South, Jr., M.D.
Troy, Ohio

Steroids for Acne

(Consultant, October '61)

Dear Doctor Sternberg:

You outline the use of steroids—then you say you do not advise this treatment for juvenile or ordinary pustular acne.

Would you tell me what treatment you would use for girls 12-14-16 years of age; would steroids disturb their menstrual cycle? Also discuss treatment for boys in the same age bracket. — W. B. Spalding, M.D.
Plattsburg, Missouri

The corticosteroid treatment, in our opinion, should be reserved for only the deep pustular and cystic acnes which are producing considerable scarring.

For the average moderate acne we recommend a combination treatment of good personal hygiene in cleaning the face, an astringent antiseptic acne lotion, usually one containing sulphur and a keratolytic, and so-called "acne surgery" in which blackheads are removed and small pustules are opened.

— Thomas H. Sternberg, M.D.

An Orchid for CONSULTANT

Sir:

I would like to say that your small magazine CONSULTANT has impressed me immensely. Sometimes one cannot find all the information given in one of your issues in a whole month of the current medical literature elsewhere. And it pleases me that you are not trying to hide what you have to say behind a lot of unintelligible medical jargon.

— A. Fadul, M.D.
Gary, Indiana

Our thanks to Dr. Fadul for his encouraging words. — ED.

SURGERY



Carl Schiller, M.D.
State University of New York

Carl Schiller is Assistant Clinical Professor of Surgery at the State University of New York in Brooklyn. He is also Attending Surgeon in Charge of Plastic and Reconstructive Surgery at Coney Island Hospital and Maimonides Hospital in Brooklyn. Dr. Schiller received his medical degree at New York University School of Medicine and thereafter was appointed Archibald Fellow in Plastic and Reconstructive Surgery at McGill University. He is a member of the American Society of Plastic and Reconstructive Surgery and a Fellow of the American College of Surgeons.

FINGER-TIP TRAUMA

Treatment of finger-tip trauma is usually considered as minor surgery, but, if improperly done, may result in major disability. To help avoid such unfortunate results, I have gathered together the following tips on the treatment of finger-tip trauma.

Some General Rules

The best prophylaxis against infection is thorough, prolonged, and early cleansing of the skin with hexachlorophene soap followed by copious irrigation of the wound with saline. Devitalized tissue should be thoroughly excised. Antibiotics are needed only when the wound is badly contaminated or when circulation is endangered. However, if surgery must be delayed, antibiotics should be used to lengthen the "Golden Period" (6-10 hours after contamination before bac-

teria begin to multiply). To prevent the development of tetanus, a toxoid injection should be given as a booster. If the patient has not been actively immunized and tetanus infection seems likely, antitoxin should be used after skin testing.

Almost all procedures are carried out under local digital nerve block. I use a #25 needle, and enter the skin dorsally where it is thinnest and causes the least pain. One to 1½ cc. of 2% Xylocaine® are deposited on each side of the finger near the digital nerve as it lies beneath the thick skin just volar to the midlateral line (Figure 1). One-half cc. may be placed subcutaneously across the top to catch fibers innervating the dorsal aspect and sometimes, the nail. Never use adrenalin because it may cause digital spasm, which in turn may lead to gangrene

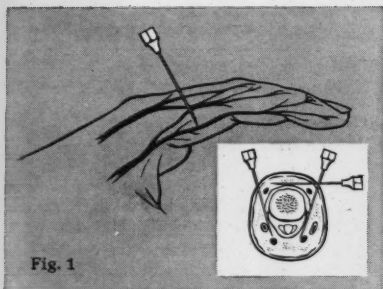


Fig. 1

of the finger. Anesthesia may be prolonged by applying a tourniquet at the base of the finger.

Closed Wounds

The most common closed wounds are hematomas, sprains, fractures, dislocations, and avulsions of the extensor tendon. Subungual hematomas are extremely painful, but the pain can be quickly and painlessly relieved without anesthetic by burning a hole through the nail with the tip of a paper clip, heated red hot in an alcohol flame. Another painful condition, a large hematoma of the digital closed space, demands drainage through an incision in the midlateral line to prevent gangrene of the terminal tuft. Dislocations and simple fractures of the finger tip are easily reduced and should be immobilized in flexion for two to three weeks in a small plaster cast or molded aluminum splint. Sprains, usually self-reduced dislocations, should be immobilized in the same way. After the splint is removed, pain and swelling of the joint may persist for several months but will gradually diminish.

Mallet finger (avulsion of the extensor tendon at its insertion) can be corrected if treated within two to three days after injury. Apply a splint, or a

small plaster-of-paris cast extending from the tip to the base of the finger with the distal joint hyperextended and the middle joint flexed to 90 degrees (Figure 2). This is difficult, but with practice you can learn to apply it properly. Be careful to avoid pressure points that will cause ulceration. If fixation without changing position can be maintained for six weeks, the results are usually excellent.

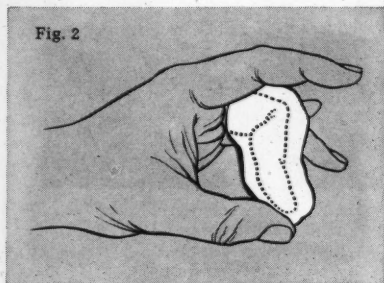


Fig. 2

Open Wounds

Open wounds of the distal phalanx require skilled management. Badly crushed fingers with comminuted fractures, lesions with loss of skin, and traumatic amputations are best treated in the hospital. Skin grafting will best preserve length, function, and appearance. For simple lacerations, suturing under digital block is preferred and results in rapid healing with few complications. I use a 5-0 nylon suture on an atraumatic cutting needle for finger wounds and find it satisfactory. Proper closure of the skin and a firm, but not constrictive, bandage controls most bleeding. Only the briskly bleeding vessels need be clamped; rarely are ties needed.

Puncture wounds caused by clean objects can be treated conservatively by simple cleansing if kept under close observation. When infection seems

likely, as in punctures with an obviously contaminated object, make a small incision in the thick skin and treat with compresses and anti-tetanus prophylaxis. Foreign bodies should be located by x-rays and removed if easily accessible. If not, they should be removed in an operating room, for they can be very difficult to find. Small metallic chips embedded in or near the bone may be left alone since they rarely cause difficulty. To remove fishhooks, first clip off their "eyes" and then advance them along their path of entry. To remove rivets with both ends mushroomed, saw or cut one end away; sterilized mechanic's tools prove very helpful for this procedure. After removal of the foreign body, the wound should be debrided carefully and either left open or loosely closed to permit drainage.

Injuries to the Fingernail

Nail injuries are sometimes associated with injury to the nail bed, compound fractures, or partial avulsion of the tip. These injuries usually occur when the finger is caught in a closing door or a scissors-like mechanism, such as a folding chair or carriage. If there is no concomitant injury, the loose nail may be removed and the finger dressed with a single layer of fine mesh, vaseline gauze and a firm dressing. However, when other injuries are present, the nail may be used as an excellent natural splint. It will aid in the anatomical replacement of bone and soft tissues and maintain the nail bed in the best possible condition for regrowth of the nail. A simple technique is shown in Figure 3.

Two trephine holes are drilled or burned in the nail distal to the cuticle. The posterior nail fold is lifted from

the underlying nail bed by a small blunt instrument. After debridement, a mattress suture is placed through the posterior nail fold dorsal to the nail, passed through the holes and back again. Fractures are reduced, if present. The nail is now slipped back into its anatomical position and held by tying the mattress suture. The lacerated or avulsed soft tissue will fall into proper position and is sutured with 5-0 nylon. No fixation other

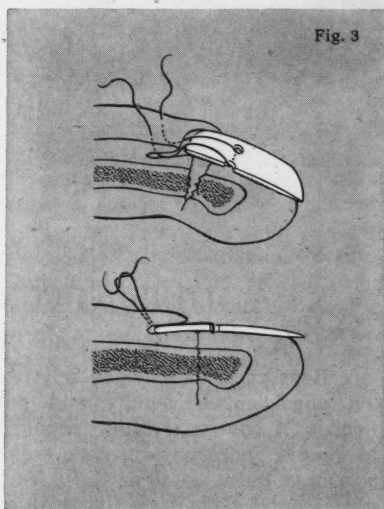


Fig. 3

than a firm dressing over vaseline gauze is needed, but you should change dressings frequently to check for infection. Fortunately this rarely occurs. In four to five months, the new nail usually grows out in continuity with the old. Excellent functional and cosmetic results are obtained by this method.

Adherence to the foregoing principles will minimize deformity, restore maximum function in minimum time, and thereby diminish the heavy economic burden inherent in these relatively trivial injuries.

GYNECOLOGY



Warren R. Lang, M.D.
Jefferson Medical College

Warren R. Lang is an Associate Professor of Obstetrics and Gynecology at Jefferson Medical College. He is also Associate Director of Obstetrics, and Chief of the Vaginitis Clinic at Jefferson Medical College Hospital. He has served as chairman of several conferences of the New York Academy of Sciences and as editor of the transactions of the Inter-Society Cytology Council. Since his graduation from Jefferson Medical College, Dr. Lang has written about 70 scientific papers, most of them dealing with vaginal and cervical disease, cytology, and the problems of genital cancer.

ADULT INFECTIOUS VAGINITIS

Infectious vaginitis may severely tax the physician's ingenuity and patience. Of course, it often responds to simple, more or less nonspecific measures. But what about those frustrating, intractable cases that each of us encounters all too often? Why do they seem to resist all treatment?

Treatment of vaginal infections fails for one or more of the following reasons: (1) incorrect initial diagnosis, (2) unrecognized change in diagnosis during treatment, (3) incorrect treatment, (4) inadequate intensity or duration of treatment, or (5) reinfection.

Need for Accurate Diagnosis

I have chosen to discuss conditions that are not likely to respond to "shot-gun" therapy. By definition, then, suc-

cessful management depends upon discovering the specific cause or causes; it depends upon careful history-taking, pelvic examination, and laboratory tests. Moreover, these three steps should be repeated at every office visit to evaluate the effect of treatment or possible change of etiology.

Important in history-taking is the time of onset of the symptoms, the course of the disease, and the treatment so far. Note the nature (amount, color, and odor) of the discharge. Also ask the patient if she has experienced pruritus, local edema, dyspareunia, soreness, or external burning when urinating. Discharge is the predominant symptom of trichomoniasis; pruritus is more often the predominant symptom of candidiasis.

Pelvic examination should be complete and thorough, whether the patient is pregnant or not. The purpose is to assess the extent and the type of vaginitis, but you should also be alert for more serious concomitant disease. *Trichomonas vaginalis* vaginitis causes vaginal inflammation with a profuse, purulent, malodorous, bubbly discharge. *Candidal* (monilial) vulvovaginitis causes a scanty, highly irritating discharge with white flecks. The vaginal epithelium is reddened with white ("cream cheese," or "cottage cheese") patches; the vulva may be inflamed with local edema. In cases of atrophic vaginitis, the epithelium is thin, inflamed, and occasionally ulcerated. Bacterial vaginitis, which is rare in my experience, shows merely inflammation clinically.

Of all the laboratory tests useful in the diagnosis of vaginitis, the most informative and the easiest to perform is the wet smear. Simply wipe the posterior fornix with a cotton-tipped applicator, and insert the cotton with its specimen of vaginal secretions into a test tube containing a milliliter of physiologic saline solution. Place a drop under the microscope, and look for the following: epithelial cells (parabasal or squamous), motile trichomonads, hyphae indicative of *Candida*, leucocytes, erythrocytes, bacteria, spermatozoa, and debris. The average case of vaginal infection is easily diagnosed by this technique.

The Gram-stained smear permits a rough determination of vaginal microorganisms. For exact diagnosis and for an accurate evaluation of treatment, culture secretions for trichomonads, fungi, and bacteria. Papanicolaou smears are helpful in deter-

mining estrogen effect in the non-inflamed vagina and in screening for malignancy. All suspicious lesions should be biopsied. Non-pregnant women with candidiasis should always be checked for diabetes mellitus.

General Principles of Therapy

Even though specific therapies are always desirable and necessary, there are certain general principles of management applicable to all varieties of vaginitis. Systemic measures play a minor role, except when systemic disease is present, too; for instance, candidiasis is frequently associated with diabetes mellitus, pregnancy, or the use of broad-spectrum antibiotics. Two other nonspecific measures that are occasionally helpful for trichomoniasis are treating the abnormal cervix, and excising the Skene's tubules. Only rarely has either proved useful in my experience. Also of little value, in my opinion, are efforts to thicken the epithelium (estrogen), to favor normal flora (introduction of Lactobacilli), to modify pH toward the acid side (various buffers), and to increase vaginal sugars (introduction of simple carbohydrates). Urologic investigation and treatment of the husband are recommended in intractable cases of trichomoniasis, however.

Management of Four Major Types of Vaginitis

Trichomonas vaginalis vaginitis is a chronic, recurrent, and resistant infection. Systemic treatment is certainly preferable to local treatment, since systemic treatment attacks the causative organism wherever it may be hiding. Metronidazol (Flagyl®, Searle), a new oral medication, seems to be effective when administered to both wife and husband in dosages of 250

mg. twice daily for ten days. However, vaginal metronidazol given simultaneously does not seem to be necessary. Vaccines, so far, have failed.

Local medications should be administered over long periods but used with caution. I have had best results with diiodohydroxyquin 100 mg. (Floraquin®, Searle), an organic arsenical (Carbarsone®, Lilly), and silver picrate (Picragol®, Wyeth). It should be remembered that arsenicals, although effective, may cause a dermatitis. Douching should be prescribed before insertion of this or any tablet. I prescribe a douche of lactic acid USP, 1 teaspoonful to two quarts of warm water.

Candidal (monilial) vulvovaginitis is usually caused by *Candida albicans*. Local therapy is usually effective especially in non-pregnant women. I prefer nystatin tablets (Mycostatin®, Squibb), chlordanol cream (Sporostacin®, Ortho), propionate compound jelly (Propion Gel®, Wyeth) or a gentian violet compound. Sodium bicarbonate douches, two tablespoonfuls to two quarts of water, afford rapid relief at the onset of therapy. Vulvar itching,

often associated with candidal vaginitis, is relieved by careful cleansing and applying nystatin powder or cool witch hazel compresses.

Bacterial vaginitis caused by mixed flora can be satisfactorily treated with lactic acid douches, triple sulfa vaginal tablets or cream (Sultrin®, Ortho), or nitrofurazone suppositories or cream (Furacin®, Eaton). Cleansing douches suffice in mild cases. When specific bacterial infections such as *Staphylococcus aureus* are present, specific countermeasures determined by sensitivity testing are indicated.

Atrophic vaginitis can sometimes be relieved with mild douches or an acid-buffered jelly (Aci-Jel®, Ortho); however, the atrophic vagina is frequently infected. Trichomoniasis and candidiasis infections are managed as described above. Estrogen creams are not usually required.

None of the foregoing comments is meant to suggest that treatment of infectious vaginitis can always succeed. However, careful, repeated diagnosis followed by persistent, specific treatment will conquer most seemingly intractable infections.

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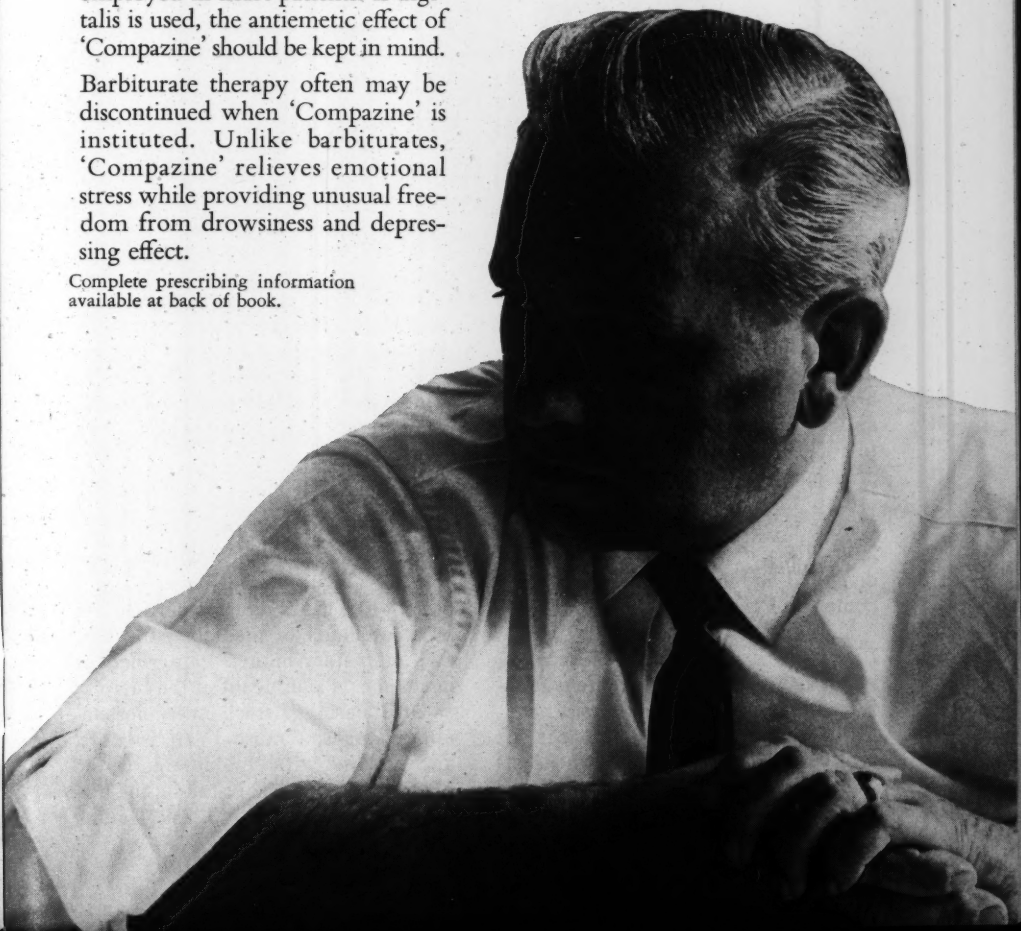
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NEUROLOGY



David J. LaFia, M.D.
Jefferson Medical College

David J. LaFia is Instructor in Neurosurgery at Jefferson Medical College and Assistant Neurosurgeon at Jefferson Medical College Hospital and Methodist Hospital, Philadelphia. He received his medical education at Jefferson Medical College, and is certified by the American Board of Neurological Surgery. In 1959, he spent a year at Johns Hopkins Hospital, under a Special Traineeship award from the National Institute of Nervous Diseases, working in experimental epilepsy and clinical electroencephalography. He is a member of the American Epilepsy Society, and author of the book NEUROLOGY SIMPLIFIED (Charles C Thomas).

EPILEPTIC SEIZURES THAT FIRST OCCUR IN ADULthood

Epileptic seizures that first occur in adulthood should always be considered as symptoms rather than a disease. Their onset between the ages of 20 and 50 may be the first warnings of a brain tumor, vascular malformation, or other serious disorder of the brain. To treat the symptoms with anticonvulsant drugs without trying to determine the cause means that the physician and patient may be lulled into a false sense of security. But Nature is never lulled, and sooner or later the patient's life becomes endangered and accurate diagnosis may come too late.

I saw an example of this recently when a 43-year-old housewife was referred for focal epileptic seizures consisting of motor convulsions in the left arm and face. She had had these attacks for almost five years and was treated — effectively, at first — with

anticonvulsant drugs. But, after four years of treatment, the seizures began to recur more frequently and the drugs were less helpful. Studies revealed a meningioma in the motor cortex of the right frontal lobe. This was removed, and fortunately the patient was spared needless paralysis of the arm and face—and possible premature death.

There is no quick, easy short-cut to diagnosing and treating adult epilepsy, but certain rules of thumb are helpful. Let us suppose you have a patient like the one just described. As in other fields of medicine, the first step is history-taking. Pain, such as headache, is significant in the history, as are hearing disturbances, personality changes, abnormal gait, tremors, and trouble with sphincters of the bladder and bowels. In taking the history, be careful not to ask leading

questions like, "Do you see double?" Instead, ask, "Do you have any trouble with your vision?"

And, of course, a complete physical examination is needed, too, to rule out possible causes of seizures such as chemical imbalance (for example, uremia, or hypoglycemia from any cause) or the anoxia or cerebral edema that might be produced by cardiovascular disturbance.

After history-taking and physical examination, which will give an idea of the probable diagnosis, you will want to put the patient through a series of more or less standard movements to test the functional integrity of the different levels of the brain and spinal cord. Have him close and open his eyes; follow a moving object; stick his tongue out; place his finger to his nose. As he walks the length of the room, look for poor coordination or signs of paralysis. When he talks, be on the lookout for slurred speech or confusion of ideas. Then, elicit the several tendon reflexes.

But the single most important part of the neurologic examination is observing the optic fundi for possible papilledema, hypertensive retinopathy, diabetic retinopathy. Without looking at the optic fundi, a brain tumor could be missed. I would, at this point, enter a strong plea for ophthalmoscopy. The procedure is easy and worth every moment it takes.

After examining the optic fundi, check the visual fields. No elaborate gadgets are needed. Simply have the patient look squarely at your nose without moving his eyes; then, with your face approximately 3 feet from him, extend your hands and move the fingers

of one hand at a time to see if he can see movement. Rotate your hands in the four quadrants of the visual field and alternate the finger movements randomly to be sure the patient isn't tricking you. Repeat the procedure while the patient keeps one eye closed and then the other.

Eye movement also should be checked, as should pupil size and shape, and reaction to light. In older patients particularly, listen over the head for a bruit when you suspect an arteriovenous malformation of the cortex. Check hearing with a tuning fork or by whispering.

The strength, coordination, sensation, and reflexes of the arms and legs should also be tested. Remember that the testing of reflexes has only a comparative value; that is, findings are significant if there is a difference in response between reflexes of the right and left side of the body. Other reflexes—abdominal, plantar, and the Babinski sign—are so well known that they simply need be mentioned in passing.

Some special tests for cerebral function are worth mentioning. In suspected disorders of the frontal lobe, check for weakness in the opposite arm and leg. Ask questions to test memory, orientation, and mood, and note whether he gives silly answers to your questions. In suspected disorders of the parietal lobe, test the patient's ability to identify, by touch alone, solid objects placed in his hands.

To help establish the final diagnosis, certain techniques and outside help may be necessary. The main techniques include examination of cere-

brospinal fluid (CSF), X-ray of the skull or spine, and electroencephalography.

Not all patients need a lumbar puncture. It is generally considered to be contraindicated when there is papilledema or choked optic disk, or positive findings of brain tumor on skull X-ray.

Plain X-rays of the skull furnish clues to neurologic diagnosis and may confirm the clinical diagnosis so that further diagnostic tests are unnecessary. Beware of "negative" results in conflict with your clinical diagnosis and insist on more studies until you are certain the patient does not have intracranial disease.

Electroencephalography (EEG) does for the brain what electrocardiography does for the heart. It is almost indispensable in the study of patients with epileptic seizures, but its significance depends upon interpretation by an experienced electroencephalographer. However, it has two limitations: two of ten patients with known seizures may have normal records, and the EEG gives no clues about the pathologic type of lesion in intracranial lesions.

Persuading the Patient

Suppose you have found nothing unusual in your examination of the patient, and his CSF, X-ray, and EEG have been reported "negative." What should you do next? Without a pneumoencephalogram or an arteriogram, the possibility of organic brain disease or a focal cortical scar still cannot be ruled out. These tests are done only by neurologic specialists, but you should have a general knowledge of them so you can discuss them with


patients or their families.

You may find it difficult, however, to persuade the patient to undergo further studies, especially if his symptoms are relieved by Dilantin® and phenobarbital and he has had only one or two seizures and is otherwise in good health. You may have to tell him he may be harboring a serious disease of the brain. This may seem to be alarming him unnecessarily, but the physician who fails to inform the adult patient with seizures of the need for further studies and to search diligently for the cause of the seizures could conceivably be accused of making an incomplete diagnosis.

If it is impossible to persuade the patient that further tests are needed, you should check him at monthly intervals and watch for any change in his condition. It is especially important to re-examine the optic fundi and visual fields to make sure papilledema is not developing. Sometimes the patient can be shown that a difference has developed in his ability to perform the test movements and this may provide the opportunity to persuade him to have further studies done. Less resistance will usually be encountered if he begins to require higher doses of drugs to control his symptoms.

Medical Treatment

For drug treatment of epileptic adults, phenobarbital, 30 mg. twice daily, and Dilantin®, 100 mg. three times daily, usually comprise a good starting point. However, remember that dosage is a matter of trial and error. Other drugs such as Mysoline® and Mesantoin® are also effective anti-convulsants, but must be used with caution because they often have side effects of rash, ataxia, and nausea.



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DERMATOLOGY



Gordon C. Sauer, M.D.
University of Kansas

Gordon C. Sauer, a graduate of the College of Medicine of the University of Illinois, is Associate Clinical Professor of Medicine (Dermatology) and Head of the Section of Dermatology at the University of Kansas School of Medicine. He is also a consultant in dermatology at the Munson Army Hospital in Fort Leavenworth, Kansas. His book, *MANUAL OF SKIN DISEASES*, (Lippincott) indicates his special interest in dermatologic medical education for physicians in other specialties, in general medicine, and in training.

NEURODERMATITIS: DIAGNOSIS AND TREATMENT WITH A NEW TECHNIQUE

Neurodermatitis is a very common term—in fact, too common, for it is often used incorrectly to designate many skin eruptions that are something else. And to make matters more confusing, even when the word is applied correctly, it is really a misnomer because neurodermatitis is not due to “nerves,” but rather to a reflex habit of itching and scratching. True, it can be aggravated by stress and tension, as can headaches and duodenal ulcers; but dry skin, contactants, age, and infection are more likely factors. There is another name for it—lichen

simplex chronicus—but it is too cumbersome ever to be well known or widely used.

A final word regarding nomenclature. Neurodermatitis, which is a localized skin disease, is not to be confused with disseminated neurodermatitis, which is known also by the better term atopic eczema. Atopic eczema is a chronic, rather generalized, dermatitis of infants (infantile eczema), adolescents, and young adults occurring in individuals with a hereditary predisposition toward the atopic diseases

such as asthma or hay fever. Thus, localized neurodermatitis and disseminated neurodermatitis or atopic eczema are completely unrelated diseases.

Neurodermatitis is usually characterized by a single patch of chronic, itching, dry, scaly, thickened skin. A single lesion may resemble psoriasis; however, with psoriasis, there are usually silvery white scales and less lichenification. Multiple lesions, which are much less frequently seen, may at times be mistaken for psoriasis, atopic eczema, contact dermatitis, hypertrophic lichen planus when on the anterior tibial area, or seborrheic dermatitis when in the scalp.

What Causes Neurodermatitis?

Neurodermatitis usually follows, and is the result of, an itching skin lesion such as contact dermatitis, seborrheic dermatitis, insect bite, or stasis dermatitis. With the resultant itching and chronic scratching, the original acute dermatitis becomes overshadowed by a thickened patch of skin that the body builds up as a defense against the traumatic scratching. A true "vicious-itchous" cycle develops; the more the person scratches, the more the patch itches, then more scratching, and more itching, and so forth. Secondary bacterial infection, a rather frequent complication, may add to the patient's woes.

Distribution

Neurodermatitis frequently occurs at the nape of the neck (especially in women), on the wrists, the ankles, the ears (a cause of external otitis), anal area (a frequent cause of pruritus ani), scrotum, and vulva.

Treatment

Most cases respond to correct therapy but some prove extremely resistant. For example, what would be the treatment for a small patch of neurodermatitis on the wrist, as shown in Figure 1, assuming that the patient has had this itching lesion for six months? First, explain to the patient that scratching is keeping this skin lesion active and that the purpose of treatment will be to lessen the itching and remove the urge to scratch. Impress on the patient the need to cooperate by keeping "hands off."



Figure 1. A small patch of neurodermatitis on the left wrist.

Then, prescribe a salve containing hydrocortisone $\frac{1}{2}\%$, white petrolatum q.s. 15.0, to be applied at least twice a day or more often, anytime the spot itches. The salve can be made by a pharmacist either by using hydrocortisone powder, by grinding up the tablets, or by diluting a proprietary 1% ointment with an equal part of white petrolatum.

If no improvement is seen by the second visit, prescribe a stronger salve made by adding camphor 2%, phenol $\frac{1}{2}\%$, or coal-tar solution 3% to 10%. Or, on the second or subsequent visits, if the salve is not effective, a new form of treatment, as described below, can be instituted.

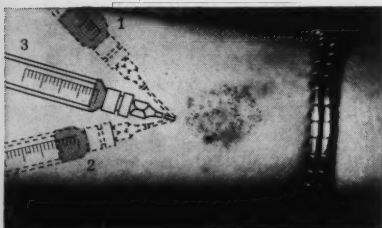


Figure 2. This illustration diagrammatically portrays the injection of the lesion with corticosteroid. The needle is moved from side to side (1, 2, 3) as it is advanced so that the medication is spread beneath the entire lesion (dotted area).

Using a one-inch-long #24 needle and a Luer-lock type syringe, inject $\frac{1}{2}$ or 1 cc. of Triamcinolone Parenteral Solution® (10 or 25 mg. per cc.) intradermally or subcutaneously directly

under the skin lesion. (A small amount of Novocain® solution can be mixed in the syringe to reduce the mild discomfort.) Do not inject all the solution in one area but spread it around as you advance the needle, as shown in Figure 2. With one or two injections at an interval of two weeks, the results should be quite dramatic. Larger lesions will be likely to require more than two injections.

At this date, it appears that this new use of a corticosteroid derivative cures or causes remissions in most cases of neurodermatitis, and will replace many of the other older treatments of neurodermatitis, including x-ray therapy.

36 days of relief from dysmenorrhea each year . . .

Most of your dysmenorrhea patients suffer 3 days of each month—36 days of every year.

'Edrisal' usually relieves these patients' symptoms—mental as well as physical. Cramps and pain are controlled, headache eased. And often just as important, lethargy and depression, the "blues," are relieved.

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antispasmodic • analgesic • antidepressant

OTHER INDICATIONS: 'Edrisal' affords unusually effective relief in such commonly encountered conditions as: chronic headache; low back pain; neuritis; neuralgia; arthritic pain; rheumatism and allied conditions; muscle and joint discomfort; sinusitis; phlebitis; certain cases of migraine.

FORMULA: Each tablet contains Benzadrine® Sulfate (brand of amphetamine sulfate), 2.5 mg.; aspirin, 2½ gr. (0.16 Gm.);

phenacetin, 2½ gr. (0.16 Gm.). Unlike most analgesic preparations, 'Edrisal' is available on prescription only.

ADMINISTRATION: Two tablets every three hours if needed. Only in exceptional cases will more than six to eight tablets be required in a 24-hour period. For best results, 'Edrisal' should be given about half an hour before eating. In dysmenorrhea, best results are obtained by starting

medication two days before menstruation.

In higher dosage ranges, certain individuals may experience some disturbance of sleep if 'Edrisal' is administered in the late afternoon or evening. This, however, can easily be controlled with a mild sedative.

SIDE EFFECTS: Instances of insomnia, excitability and increased motor activity—when they occur—are ordinarily mild, and can be controlled by

adjustment of dosage.

CAUTIONS: Use with caution in patients hypersensitive to sympathomimetic compounds; in cases of coronary or cardiovascular disease; and in the presence of severe hypertension.

CONTRAINDICATIONS: Hyperexcitability; agitated pre-psychotic states.

AVAILABLE: In bottles of 50 and 500 tablets. Prescribing information adopted January, 1961.

*to help you transform a tense, irritable, depressed
patient into a woman who is receptive to your counsel
and adjusted to her environment*



DEXAMYL® SPANSULE®

brand of sustained release capsules

FORMULA: Each 'Spansule' capsule No. 1 contains Dexedrine® (brand of dextro amphetamine sulfate), 10 mg.; amobarbital [Warning, may be habit forming], 1 gr. Each 'Spansule' capsule No. 2 contains 'Dexedrine' (brand of dextro amphetamine sulfate), 15 mg.; amobarbital [Warning, may be habit forming], 1½ gr. The active ingredients of the 'Spansule' capsule are distributed among hundreds of minute pellets with varying disintegration times. A therapeutic dose is released immediately and the remaining medication, released slowly and without interruption, sustains the effect for 10 to 12 hours.

INDICATIONS: (1) for mood elevation in depres-

sive states; (2) for control of appetite in overweight.

USUAL DOSAGE: One 'Dexamyl' Spansule capsule taken in the morning.

SIDE EFFECTS: Insomnia, excitability and increased motor activity are infrequent and ordinarily mild.

CAUTIONS: Use with caution in patients hypersensitive to sympathomimetic compounds or barbiturates and in cases of coronary or cardiovascular disease or severe hypertension.

PRESCRIPTION SIZE: Bottles of 30 capsules.

Prescribing information adopted January, 1961.

Smith Kline & French Laboratories, Philadelphia



GASTROENTEROLOGY



Theodore Cohen, M.D.
New York University

Theodore Cohen is an instructor in Clinical Medicine at the College of Medicine and the Post Graduate Medical School of New York University. A Fellow of the American College of Gastroenterology, he is Research Associate at the Brooklyn Hebrew Home and Hospital for the Aged and is on the visiting staff of Bellevue Hospital, University Hospital and Booth Memorial Hospital.

AGE AND GASTROINTESTINAL DISORDERS: A FEW REMINDERS

All too often, nonspecific gastrointestinal symptoms in an elderly patient are dismissed as a chronic functional disorder or else considered as a degenerative disease. The attitude, "He's getting old, so what can you expect," is a common one. This attitude, however, is not justified, for while some gastrointestinal disorders are peculiar to the aging process, many disorders are not. In either case, most will respond to treatment. Symptoms in an elderly patient, of course, can be difficult to interpret — either because they are atypical or else because they may co-exist with other diseases the patient may have. Nevertheless, if the patient's complaint is persistent you can usually find some disease present. This article reviews briefly some of the gastrointestinal diseases I find most often in older people who are referred to me.

Hiatus hernia, which generally occurs after the age of 50, may be responsible for various gastrointestinal symptoms such as heartburn, belching, fullness in epigastrium, and bleeding; or it may mimic cardiac disease. Hiatus hernia should be suspected in any older patient if his upper abdominal discomfort is aggravated when he lies down and if borborygmi are audible posteriorly in the chest. Usually conservative medical therapy is effective, but if it is not and severe discomfort or bleeding persists, surgical intervention may be necessary.

Peptic ulcers occur frequently in older people, and are more likely to bleed than in those who are younger. In addition, medical management of the bleeding may not be as successful as in younger patients because the sclerotic pipestream artery may not re-

tract, and as a consequence, surgery is also more often required.

Diverticula of the colon are said to be as common in old people as gray hair and wrinkles. The diverticula occur most often in the sigmoid and descending colon but also may occur throughout the large bowel. About 25% of patients who have them will later develop diverticulitis and need medical care. Their symptoms will usually resemble those of left-sided appendicitis, with pain, tenderness, and rigidity in the left lower quadrant. However, at times the inflammatory process may be so severe that the patient may seem to have an intestinal obstruction that clinically cannot be distinguished from a malignant neoplasm. Between 10% and 25% of patients who have diverticular disease also have an occasional rectal hemorrhage, and if arteriosclerotic vascular disease is present, massive bleeding may occur frequently.

Acute appendicitis is not as rare in senescence as is sometimes supposed, but it may be difficult to diagnose because its symptoms are frequently atypical. The older person may have no fever and his less marked leukocyte response to acute infection may further confuse the picture. Too often, prolonged procrastination and observation results in perforation, peritonitis, and death.

Biliary calculi increase in incidence as people get older. Often the calculi cause attacks of severe upper abdominal pain and jaundice. Acute gallbladder disease is, in fact, the most common cause for emergency abdominal surgery in older people. About 8 out of 10 patients who require sur-

gery for gallbladder disease will also have gallstones.

Intestinal obstruction in older people, as a rule, is due to a strangulated hernia or a carcinoma of the left colon, marked usually by acute colicky pain, nausea, vomiting, and constipation. The peristaltic sounds are first hyperactive, but as obstruction becomes greater these sounds disappear and the abdomen becomes distended and tympanitic.

Ulcerative colitis in later life is frequently characterized by dehydrating diarrhea or massive rectal hemorrhage. Occasionally toxic megacolon and colonic obstruction may be also present. The older the patient, of course, the more serious the complications and the worse the prognosis.

In treatment, anticholinergic drugs must, of course, be used with caution. Steroids are generally helpful, but can aggravate a co-existing osteoporosis or diabetes, or may lead to electrolyte imbalance.

Adenomatous polyps, which occur in 25% of those past the age of 70, are considered to be a premalignant lesion, and should be removed whenever they are detected. In 20% multiple polyps will be present, so barium enema with air-contrast studies in such patients are mandatory. The studies should be repeated every 6-12 months after surgery, since these patients tend to develop polyps again.

Finally, no matter what gastrointestinal disorder the patient may have, I have found the best approach to diagnosis and treatment is to put myself in the patient's place. As Cicero said, "No man is so old as to think that he cannot live for one more year."



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INTERNAL MEDICINE



Reginald H. Farrar, M.D.
Seton Hall College

Reginald H. Farrar directs the Peripheral Vascular Disease Clinic and is an Associate Attending Physician at the Jersey City Medical Center; he is also Research Associate in Physiology at Seton Hall College of Medicine. He received his medical training at the University of Buffalo and the Charity Hospital of New Orleans; since then his interest has focused mainly on the problems of peripheral vascular disease. Currently, he is president of the International Library Aid Foundation which supplies medical books to libraries in underdeveloped nations.

A SIMPLE METHOD FOR TREATING STASIS ULCERS

To me, the most prominent feature of stasis ulcer, as seen in my private patients and in those who come to the Medical Center Clinic in Jersey City, is a long history of persistence in spite of vigorous treatment. My personal experience has been that, if treatment is directed toward the prevention of venous backflow and congestion in the affected leg, the ulcer will almost invariably heal in a short time. I would like to tell you about the method of treatment I have found successful.

Etiology

Before going into the details of treatment, I think it would be helpful to review the underlying causes of chronic ulceration. As you know, patients

with stasis ulcer probably all have had a deep thrombophlebitis at one time. These veins recanalize within one or two years but no longer contain functional valves; also, the valves of the perforating veins are destroyed. Most often, these incompetent veins are on the medial aspect of the lower third of the leg, and it is here that most stasis ulcers occur. So, the underlying physiopathologic defect is primarily incompetence of the deep and perforating veins of the lower leg, aggravated by the presence of superficial varicosities. The latter in themselves are not primary causes of stasis ulceration; in fact, large, tortuous varicose veins can be present for many years without the occurrence of ulceration.

Treatment

Logically, then, treatment must be directed toward reducing the venous pressure in the lower portion of the leg, preventing reflex flow from the deep to the superficial veins. This can be done with pressure produced by an elastic bandage. At the Medical Center Clinic, Dr. Milton Ashur and I use a method which is a modification of the Unna paste-boot method and have found it extremely effective. This is an old method, and an easy one to use, but for some reason is not used as often as it should be. In addition to effectiveness, this method has two important advantages: it allows the patient to be ambulatory with little restraint on his normal activity, and it gives almost immediate relief of pain.

The Method

At the first visit the ulcer is generally grossly infected; it is usually deep, with a soft margin surrounded by varying degrees of erythema. At this time, we place gauze squares, impregnated with triclobisonium chloride ointment or vaseline, directly on the ulcer with no attempt to debride or clean other than gentle washing with

warm water and soap. We use ointment-impregnated gauze packs because they will not occlude the ulcer and prevent drainage.

Over this we place a piece of $\frac{1}{4}$ "-thick soft foam rubber slightly larger than the lesion; it allows a more even distribution of pressure from the bandages subsequently applied (Figure 1). Then, we wrap the foot and lower leg with a gauze bandage impregnated with glycerine and zinc oxide (Figure 2). The glycerine-zinc oxide bandage absorbs secretions, is emollient and prevents the elastic adhesive used in the next step from irritating the skin. We carry the first bandage (the glycerine-zinc oxide) from the metatarsal heads to the insertion of the hamstring muscles. It is important to start it low to prevent swelling of the foot due to the tightness of the bandage, extend it upward to the point where most swellings of the leg end, and apply it closely but without tension. Over this we place the elastic adhesive, covering the underlying bandage completely (Figure 3). As the bandage goes up the leg, we reduce the pressure of application to establish a decreasing pressure gradient. The ankle and heel should be completely covered and the



turns of elastic adhesive bandage overlapping approximately 55%. Finally, we place Surgitube® or Tube-gauze® over the entire dressing. We instruct the patient to keep the bandage dry and leave it on until the next office visit.

At first, the bandage needs to be changed every week because of the odorous secretions from the secondary infection. However, as the infectious secretions decrease and the ulcer becomes smaller, the intervals between changes can be increased to two, three, or even four weeks. The patients are given twenty minutes of

whirlpool bath before the dressings are re-applied. We find that this cleanses the leg and increases the circulation; besides, the patients find it invigorating for their long enclosed leg.

With this method of treatment, we find that stasis ulcer of post-phlebitic or varicose origin will nearly always heal within a short time; of course, the larger the ulcer, the longer it takes to heal. Generally, ulcers which are not on the medial aspect of the ankle will heal more quickly. After healing, the patient is told to wear elastic hose to prevent recurrence.

QUESTIONS AND ANSWERS

Q. When is the boot first applied?

A. At the first visit.

Q. Are there any contraindications for this method?

A. No. However, when the patient has marked arterial insufficiency, we omit the elastic adhesive bandage; if the insufficiency is moderate, we use the elastic adhesive applying it snugly, but not tightly.

Q. Is there any sensitivity to the materials used?

A. We have rarely seen a sensitivity to anything but the elastic adhesive. Where there is sensitivity to the elastic adhesive, Diachylon®

(lead oleate) elastic bandage may be tried. Plastic foam may be used if there is sensitivity to the rubber foam.

Q. When should surgery be performed?

A. Surgery of the underlying venous pathology should not be done until the ulcer is healed completely. If attempted before complete healing, surgery is apt to be hazardous.

Q. What can be done for a stasis dermatitis?

A. We find that this condition is generally helped by the same type of bandaging as is used for the stasis ulcer.

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Delicious-tasting 'Troph-Iron' is useful as a *dietary adjunct*, in convalescent or below-par children . . . as a *nutritional supplement*, to help prevent borderline deficiencies of B₁₂, iron and B₁ . . . as a *hematinic*, in the treatment of simple iron-deficiency anemia.

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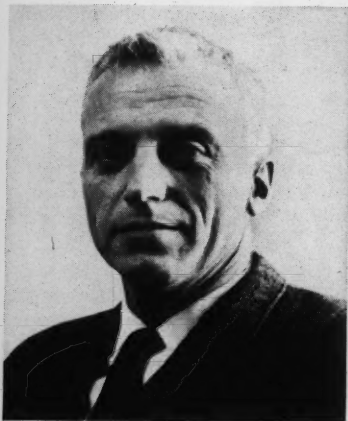
DOSAGE: As a dietary adjunct or nutritional supplement, one 5 cc. teaspoonful or one tablet daily—or as directed by the physician. For children from 6 months to 2 years, ½ teaspoonful daily. As a hematinic, one 5 cc. teaspoonful or one tablet two or three times daily—or as directed by the physician.

SUPPLIED: 'Troph-Iron' *Liquid*, in specially treated 4 fl. oz. bottles. 'Troph-Iron' *Tablets*, in bottles of 50.

Smith Kline & French Laboratories, Philadelphia



PSYCHIATRY



William F. Sheeley, M.D.

A.P.A. General Practitioner Education Project

William F. Sheeley is Chief of the American Psychiatric Association General Practitioner Education Project. He served with the U. S. Army Air Forces during World War II and was Head of the Department of Neuropsychiatry, USAF School of Aviation Medicine from 1953 to 1955. Immediately before he accepted his current position with the APA, he was Assistant Professor of Psychiatry at the University of Minnesota, and Chief of the Psychiatry Service of the Minneapolis General Hospital.

MENTAL ILLNESS: RECOGNITION AND REFERRAL

Prompt, incisive and correct action at the beginning of a psychiatric illness can help many patients recover soon after a brief, mild episode — and prevent further deterioration into chronic psychosis. You, the family physician — as the one who most often sees patients while their mental illness is in its early, most treatable stage — can help provide this action.

Almost as important as detecting new or incipient illness is discovering long-standing illness which the patient and family have been unaware of, even though it may have robbed the patient of job after job, bewildered his family, embarrassed his relations with friends and neighbors, and denied him everyday satisfaction and happiness. With present-day skills, drugs, and techniques, the family doctor can help many of these

chronically ill patients, even when he cannot do much to change the illness. Sometimes, just by explaining what is wrong, he can take unnecessary pressure off both patient and family and enable them to live together more comfortably.

Alerting Signs and Symptoms

The dramatic signs of frank mental illness such as hallucinations, delusions, hyperactivity or hypoactivity, suicide attempts, and other forms of bizarre behavior can be readily identified, even by the layman. Unfortunately, the symptoms of many incipient and chronic psychiatric illnesses are far more subtle than these, and you will have to look sharply to spot them. These subtle clues are not so obviously associated with psychiatric illness and may include: hypochondriasis, easy fatigability, loss of the

joie de vivre, pessimism, impotence, cantankerousness, job difficulties, excessive reverie, fearfulness, excessive or distorted preoccupation with sex, forgetfulness, personality change, insomnia, anorexia, defects in judgment, and restlessness. While none of these signs or symptoms is necessarily indicative of mental illness, any one of them, especially if of recent onset, should suggest the possibility of mental illness to the physician.

Confirming Information

Having detected one or more of these symptoms, you should ask the patient and his family (do not overlook the family!) for additional information. If such inquiry discloses little more of significance, you may let the matter rest. On the other hand, you may uncover astounding psychopathological processes. You may learn, for example, that the hypochondriac patient who complains of a pain in his chest actually believes that a snake is eating away at, or is twisted around, his lungs or heart. When you talk to the family of the patient who seemed so concerned because he was going broke, you may find that he has plenty of money and that no real financial problem exists. Such contradictory reports are clear signals that more extensive probing is in order.

History of Problem

If you find significant illness, your first goal should be to determine whether the illness is chronic or acute, and whether static or progressive. To do so, a careful, well-planned, purposeful history is indispensable. When properly conducted, taking such a history does not require inordinate amounts of time. It should provide reliable answers to certain cardinal questions: How, if at all, has each

symptom changed in severity or in quality? When and under what circumstances have these changes occurred? Have new symptoms appeared recently and old ones disappeared? If so, how do these off-and-on symptoms seem to be related to other symptoms and to one another?

You should also look for changes in the patient's situation both at home and at work; where possible, you should relate those changes to the illness. You might, for example, ask some questions about what has happened in the family. Have there been family crises or changes with possible impact on the patient emotionally? Can any of his symptoms be connected to any of these crises? Does he handle recent crises differently than he did those that came before?

At work, has he received a promotion with additional responsibilities that he feels he cannot carry? On the other hand, has he failed to receive a hoped-for promotion or even suffered a humiliating demotion? Did that promotion go to a hated rival? Does he find himself in a blind-alley job with little hope of escape?

Naturally, you will also search carefully for physical illnesses that may have precipitated, or at least aggravated, the psychiatric symptoms. These physical illnesses include brain tumors, pernicious anemia, exogenous and endogenous toxicities, cancer, brain trauma, encephalitis, and the so-called psychosomatic illnesses. When such concurrent somatic disorders are found, not only good medicine, but also good psychiatry obligates you to move vigorously against them.

Treat or Refer?

Discovering these incipient or mild disorders is only half the battle; han-

dling them is, of course, equally important and may be more difficult. For one thing, you may have no small difficulty deciding which of these cases you can treat and which you should refer. While it would be impossible to describe how each patient should be treated, I can offer a general suggestion that may help you decide which patients should be referred to a psychiatrist and which ones you can treat yourself.

It is safe to assume, I think, that most physicians will not hesitate to refer the seriously disturbed psychotic patient. The apparent mildness of the psychiatric illness in some patients, however, can be very deceptive. While many of these disorders lie well within the competence of the family physician, others will be very stubborn therapeutic problems, and will resist all your ordinarily effective measures. Indeed, some of these patients perplex not only the non-psychiatrist physician, but the experienced specialist as well. Even after close observation of the patient for several days in a psychiatric ward, the psychiatrist may have to defer diagnosis (although not necessarily treatment) pending further observation, perhaps as an outpatient over a more extensive period.

In general, you should almost always refer to a psychiatrist—if for no more than a diagnostic and prognostic evaluation—any patient, regardless of how mild the psychiatric illness may appear to be at the moment, in whom the condition seems to be progressive.

After You Refer

There is one final point I would like to emphasize. It is neither necessary

nor wise for the family physician to feel that his responsibility or ability to help the patient—even the psychotic patient—ends with his decision to refer. In addition to informing the psychiatrist of your findings—including data concerning the patient's family, which may be known only by the family physician, and his physical disabilities or diseases—you should keep yourself fully informed of the progress of psychiatric therapy while the patient is being treated by the psychiatrist. Furthermore, when the psychiatrist returns the patient to you, you should request a detailed psychiatric report that includes suggestions for future management. Then, as you continue the treatment of the patient, you should turn to the psychiatrist for informal guidance as required.

Finally, just as you should not overlook the family as a source of information to help you make your diagnosis, you should not overlook their need for your help to overcome the fear, bewilderment and guilt they may experience when they learn the patient is mentally ill. Many families will wonder, for example, what they did to the patient that made him ill, or whether the mental illness is a family trait that may soon show up in other members of the family or in future generations. By reassuring them, answering their questions frankly and fully, and keeping them informed of the patient's progress, you can provide aid and comfort that may not be available from any other source. Moreover, their improved attitude toward mental illness in general and the patient in particular, will facilitate therapy.

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'Temaril' is an oral medication specifically for the relief of itching. It has been found effective in relieving pruritus accompanying dermatoses of allergic, inflammatory, metabolic, hemovascular and psychic origins, as well as those whose etiology is not clearly understood.

INDICATION: 'Temaril' is indicated for the treatment of mild and severe pruritus, whether acute or chronic.

DOSAGE AND ADMINISTRATION: Dosage with 'Temaril' should always be adjusted according to the severity of the symptom and the response of the patient.

	Usual Dosage	Resistant Cases
adults	tabs.: 1 (2.5 mg.) q.i.d. caps.: 1 (5 mg.) q12h	tabs.: 2-4 q.i.d. caps.: 2-3 q12h
children (ages 7-12)	tabs.: 1 t.i.d. caps.: 1 at night	tabs.: 2 t.i.d. caps.: 1 q12h
children (ages 3-6)	tabs.: 1 t.i.d. syr.: 1 tsp. (2.5 mg.) t.i.d.	tabs.: 1 q.i.d. syr.: 1 tsp. q.i.d.
children (ages 2 and under)	syr.: 1/2 tsp. t.i.d.	syr.: 1/2 tsp. q.i.d.

NOTE: Total daily dosage should not exceed 5 mg. for children ages 2 and under; 10 mg. for children ages 3-6, or 15 mg. for children ages 7-12. The physician should caution parents not to administer more than prescribed dosage to children.

When itching is a nighttime problem, larger doses (in adults: 5 or 10 mg.) should be administered at bedtime, with daytime dosage adjusted accordingly.

SIDE EFFECTS: Mild and temporary drowsiness may be encountered. Dizziness, dryness of the mucous membranes and gastrointestinal upsets have occurred occasionally. All of these effects usually disappear after a few days of medication. Persistent drowsiness may be overcome by reduction of dosage.

CAUTIONS: Clinical experience has demonstrated that 'Temaril', a phenothiazine derivative, has a wide margin of safety and that there is little likelihood of blood or liver toxicity, or neuromuscular reactions (extrapyramidal symptoms). The physician should be aware, however, of their possible occurrence, and patients should be kept under regular observation.

FORMULA: Each tablet and each 5 cc. teaspoonful of 'Temaril' Syrup contains trimепazine, 2.5 mg., as the tartrate. (The syrup contains alcohol, 5.7%). Each Spansule[®] capsule contains trimепazine, 5 mg., as the tartrate.

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Prescribing information adopted January, 1961

PEDIATRICS



H. William Clatworthy, Jr., M.D.
Ohio State University

H. William Clatworthy, Jr., is Chief of Surgical Service at the Children's Hospital, Columbus, Ohio, and Professor of Surgery at Ohio State University Medical School. He served as Program Chairman of the 27th Ross Pediatric Conference in 1957, and is the author of 51 scientific articles. He is a Diplomate of the American College of Surgeons and of the American Academy of Pediatrics; he is also a member of the International Society of Surgery and the British Association of Pediatric Surgeons.

WHEN TO DO WHAT IN CHILDREN'S SURGERY

If you treat children, you are probably proficient at recognizing problems that require surgical correction. And the improved skill of pediatric surgeons—particularly in centralized care areas—is steadily decreasing operative complications and mortality and thereby increasing the number of lesions that can be treated successfully. So the main problem is usually not “What is the matter with the child and what can be done about it?” but “When should we schedule surgery?” We surgeons believe that certain times are much better than others for surgery in children and I would like to tell you my own ideas on the subject: they are probably best considered under three broad categories: emergencies, semi-elective surgery, and elective surgery.

Emergencies

These arise from accidents, malignancies, and neonatal anomalies that are life-threatening. In children just as in adults, life-threatening accidents almost always must be dealt with immediately. However, surgery for malignancies and most neonatal anomalies can usually be delayed for a short time, so it is often possible to transfer the child to the nearest center where specialized pediatric surgery is available.

In general, the younger the infant the less disturbing major surgery will be. The newborn has been living like a lord on a cord; he is well hydrated and hypervolemic; he has high levels of circulating serum corticoids and inherited antibodies which help him to

adapt to stress and thwart infection. He has a high threshold for pain and thus needs lower doses of anesthetics. If handled gently and skillfully, he will tolerate major surgery extremely well and recover rapidly — or, if the need arises, he has the reserves to weather a prolonged convalescence.

From three to fourteen days of age, the infant becomes strikingly less able to stand surgical stress. He then is normally in a catabolic phase, he is losing weight, and his adrenal response is sluggish. Elective surgical procedures should be avoided during this time.

In the correction of congenital anomalies, the most gratifying results are obtained when treatment is begun in the first few hours or days after birth, before the defect has had a chance to produce complications that sap the infant's meager strength. So early diagnosis is vital and cannot be over-emphasized. We are all quick to recognize the obvious lesions such as omphalocele, massive teratoma, imperforate anus, and meningocele. Unfortunately, we are somewhat slower about recognizing, and even looking for, the more subtle lesions — particularly those that involve the respiratory, alimentary and urinary tracts. Such lesions, though hidden, are often more of a threat to the infant's survival than the obvious, bizarre ones, and we should keep them in mind whenever we attend the newborn.

There are several things all of us who attend the newborn can do to make early diagnosis of congenital anomalies more certain. We should...

- be sure to examine all infants as soon as possible after birth, not the day after.

- do whatever we can to see that the newborn nursery functions as a recovery room, or intensive care unit, with frequent observation of vital signs.

- be alert to the common "danger signals" of respiratory distress, alimentary or urinary tract obstruction, or CNS disturbance (see Table 1).

Semi-Elective

Semi-elective surgery most frequently involves correction of major congenital anomalies that are not immediately life-threatening, but interfere with normal growth and lead to morbidity and complications. When confronted with an anomaly of this kind, many physicians choose to be "conservative" and let a child grow up until he is big enough to be operated on as an adult. Actually, there is little evidence to recommend such an approach.

TABLE I — Danger Signals in the Newborn Infant

rapid respiration (over 40/minute)
difficult respiration (retraction, etc.)
cyanosis (a single episode)
excess salivation
abdominal mass
vomiting of bile
failure to evacuate meconium (within 24 hours)
inability to void (or inadequate or intermittent stream)
convulsions
lethargy
jaundice (first 24 hours)

Obviously the thing to consider when trying to decide on the best time to correct a major congenital defect is the probable result of allowing the defect to persist. What complications

can be expected if the defect goes uncorrected, and are they really less dangerous than surgery? In almost every instance, you will find that the attrition rate inherent in the defect makes early correction desirable; usually the risk of waiting exceeds the danger of surgery.

Let us take for example the division of a patent ductus arteriosus. There are still some physicians who recommend that this procedure be deferred until a child is 6 to 12 years old unless he shows signs of heart failure. Yet published reports comparing the operative results in children under 6 to those in older children show that the mortality is essentially the same regardless of the patient's age. On the other hand, it is clear that persistent patency of the ductus arteriosus invites prolonged growth failure in many; and, in some, there is the risk of premature death from complications such as endarteritis and progressive pulmonary vascular changes that may make corrective surgery impossible. It is difficult to escape the conclusion that surgical correction of this defect should be carried out early—the sooner, the better.

Inguinal hernia is a more common problem in which a similar line of reasoning is applicable. Here in the Columbus area, physicians have, for several years, been referring infants with congenital, indirect inguinal hernias for early, so-called radical surgery, as soon as the hernia is diagnosed. This approach seems desirable for several reasons: first, there is little hope for permanent cure by non-surgical treatment, so surgical correction is almost inevitable; in infants, post-operative mortality after this procedure is nil and complications rare; perhaps most important, immediate

surgery spares the infant the risk of major complications of hernia such as incarceration or strangulation which occur in 10-15%, usually in the very young. Indeed, in such cases, waiting involves real hazards of its own and seems more "radical" than surgery.

Of course, it is wise to avoid early surgery when dealing with conditions apt to be self-limited. Infantile umbilical hernia is a common example. It is known to close spontaneously in 80% of cases before the child is two years old, and in more than 95%, it disappears by the time the child enters school.

Elective Surgery

Probably the most important consideration for the scheduling of elective surgery in children is the prevention of emotional trauma. Recently at our hospital we studied the emotional effects of surgery and hospitalization on 104 children 2 to 14 years of age. We found that approximately one-third of these children suffered important emotional upsets following elective surgical procedures; and, the most serious upsets occurred in the two- and three-year-olds. Similar results have been reported by others. As might be expected, we also found that some things about surgery are especially disturbing to children. Children especially *dislike* the induction of anesthesia, injections, and separation from their parents. They are generally indifferent about white uniforms and examinations. They *do* like "toy ladies," nurses, other children, frequent snacks and television.

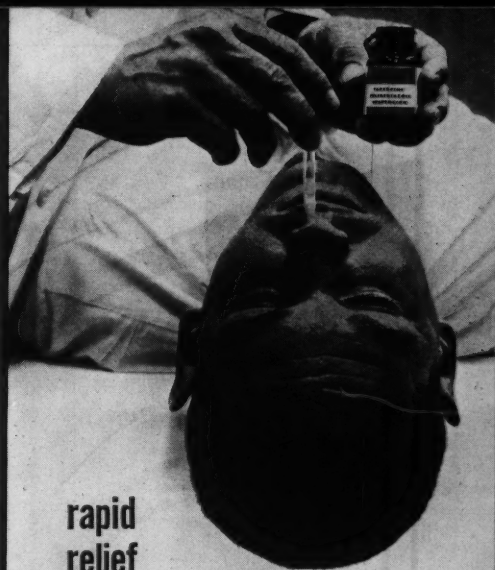
There are many things we can do to prevent emotional disturbance in children who must undergo surgery. In

my own experience, the following have been the most important:

- Doing elective surgery as often as possible during infancy — the earlier the better.
- Avoiding elective hospitalization in insecure children, especially between the ages of 2 and 5. (However, I would like to emphasize that in certain instances, *delaying* surgery can produce greater psychological trauma than hospitalization, even at a vulnerable age. The correction of cosmetically important defects such as an ugly birthmark or greatly protruding ears is psychologically necessary and should generally be done before the child goes to school.)
- Spending some time preparing the child and his family for the hospital experience.
- Using long-acting oral medications whenever possible.
- Insisting on adequate premedication before induction of anesthesia.
- Allowing frequent visiting or parental rooming-in.
- Seeing that play areas are provided in the hospital where pre-school children can get together.

Comment

There is no cookbook plan for scheduling surgery in children. Like most decisions in medicine, this one depends on several factors; correct and early diagnosis; knowledge of the natural progression and complications of each disease or deformity; and awareness of the age-related variability in resistance to stress in children. If we consider all these things, we can proceed confidently. Remember, children are fine surgical risks if they are treated as children and not as undersized men and women.



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Further applications of 'Paredrine' Sulfathiazole Suspension at home assure your patient of continued decongestion and bacteriostasis.

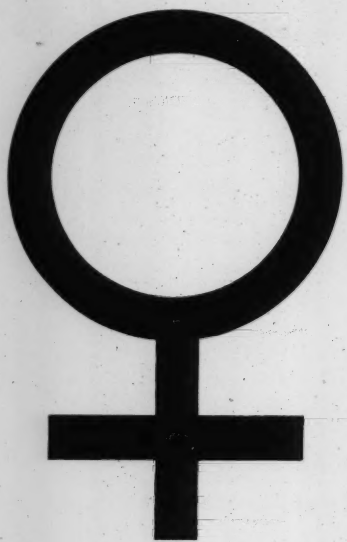
ADMINISTRATION: Instil 2 to 5 drops into each nostril not oftener than every two hours.

The possibility of a patient being sensitive to the sulfonamide content of this preparation is slight but should be borne in mind.

FORMULA: A suspension of Microform® sulfathiazole, 5%, in an isotonic solution of 'Paredrine' Hydrobromide (hydroxyamphetamine hydrobromide), 1%; preserved with ortho-hydroxyphenylmercuric chloride, 1:20,000.

AVAILABLE: In 1 fl. oz. bottles.

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Of 39 women treated for long-term
infertility with 'Cytomel'

18 became pregnant

13 with amenorrhea began
to menstruate regularly

From a report by Foster, H.M.: Am. J. Obst.
& Gynec. 77:130 (Jan.) 1959.

CYTOMEL®

brand of liothyronine

ADMINISTRATION AND DOSAGE: Dosage should be adjusted according to the severity of the condition and the response of the patient.

Most patients should be started on 25 mcg. of 'Cytomel' daily. To increase dosage to recommended maintenance levels for these patients, increments of 12.5 or 25 mcg. may be made in the daily dosage at intervals of one or two weeks. Dosages in the range of 100 mcg. daily, and higher, are well tolerated by many patients.

When starting dosage is 5 mcg. daily (as in myxedema, male infertility, simple goiter and in patients being switched from thyroid, L-thyroxine, or thyroglobulin), increments of 5 or 10 mcg. may be made in the daily dosage at intervals of one or two weeks. When dosage reaches 25 mcg. daily, increase as described above.

'Cytomel' is usually administered in divided doses.

Note: In geriatric patients or in children always start with 5 mcg. daily and adjust dosage in increments no greater than 5 mcg.

Indication	Recommended Starting Dose	Recommended Maintenance Dose
Hypometabolism	25 mcg. daily	25-75 mcg. daily
Mild Hypothyroidism		(Smaller doses may be fully effective in some patients.)
Myxedema	5 mcg. daily	50-100 mcg. daily
Female Reproductive Disorders	25 mcg. daily	25-50 mcg. daily
Male Infertility	5 mcg. daily	10-25 mcg. daily
(Based on sperm count or sperm motility responses after two to four weeks of treatment at a given dosage level, the daily dosage may be increased by 5 or 10 mcg. If after further treatment the desired response has still not been obtained, the daily dosage may again be increased. Although total daily dosage usually need not exceed 25 mcg., as much as 100 mcg. daily may be used if necessary.)		
Simple (non-toxic) Goiter	5 mcg. daily	25-75 mcg. daily

SPECIAL CONSIDERATIONS AND CAUTIONS:

Tachycardia, excitability, headache, or excessive sweating are signs of overdosage. Medication should be interrupted until the unpleasant symptoms disappear, and then resumed in smaller doses. Since the return to pretreatment status is rapid, 'Cytomel' can usually be resumed at the desired dosage after one to two days.

When a subnormal BMR exists as part of the clinical syndrome of hypometabolism or hypothyroidism, administration in excessive dosage will cause elevation of BMR to levels above normal.

'Cytomel', unlike various forms and fractions of thyroid, will not cause elevation of the blood protein iodine level.

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Since 'Cytomel' is physiologically related to thyroxine, it is not recommended for use in the presence of angina pectoris, in other cardiovascular disorders, or ischemic states. However, if it is used in the presence of such conditions, the starting dosage should never be more than 5 mcg. daily. If dosage is increased, it should be in increments of no more than 5 mcg. daily at approximately two-week intervals.

Hypopituitarism, morphologic hypogonadism and nephrosis should be ruled out before 'Cytomel' is administered.

CONTRAINDICATION: Addison's disease.

FORMULA: Each 'Cytomel' tablet contains 5 mcg. or 25 mcg. of liothyronine (L-triiodothyronine or LT3), as the sodium salt; 25 mcg. of 'Cytomel' is calorimetrically equivalent to approximately 1 gr. of thyroid.

AVAILABLE IN TWO DOSAGE STRENGTHS: 25 mcg. (scored) tablets in bottles of 100 and 1000; 5 mcg. tablets in bottles of 100.

Prescribing information adopted Jan. 1961



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only 1 capsule daily

OTOLARYNGOLOGY



David Myers, M.D.
Temple University

David Myers is Professor and Chairman, Department of Otorhinology, Temple University Medical Center, and Chief of the Ear, Nose and Throat Departments at Philadelphia General Hospital, and St. Christopher's Hospital. His affiliations include the American Academy of Ophthalmology and Otolaryngology, the American Otologic Society, the American Otorhinolaryngological Society, and the American College of Surgeons. Doctor Myers is especially interested in problems of deafness, which has been the subject of many of his 60 published articles.

SEROUS OTITIS MEDIA: A MUCH OVERLOOKED CAUSE OF HEARING LOSS IN CHILDREN

In serous otitis media, a clear exudate or thick viscous fluid forms and is retained in the middle-ear spaces. Exactly what causes the fluid to form is not well understood, but it often develops as an aftermath of antibiotic therapy for middle-ear infections. There generally is no fever, pain, or even discomfort. Symptoms are essentially benign and include some loss of hearing and a feeling of fullness or of water in the ear. Children, especially younger ones, seldom complain of the condition and it often goes undetected for some time.

Then a parent, usually the mother, or

a teacher, may notice that the child seems inattentive or dull. There may be a lowering of grades and of scholastic participation. The usual methods of testing the child's hearing are not sensitive enough to pick up the defect. The family physician or pediatrician will sometimes reassure the parents that there is nothing to worry about, that this is nothing more than childhood inattention which will be outgrown. Fateful words! This is one of the common clichés in otology and a phrase that rarely, if ever, should be applied to ear disease. Left untreated, deafness almost always takes one course—it gets worse!

Condition Becomes Chronic

Serous otitis media can, if not diagnosed and treated early, develop into chronic adhesive otitis media which, in turn, leads to cholesteatoma and extensive damage to the sound-conducting structures of the middle ear. If, however, it is detected early, the fluid aspirated, and appropriate follow-up care provided, the chances are good that there will be fewer deafened adults in the next generation requiring rehabilitation and vocational guidance. Therefore, when hearing loss is suspected—no matter how mild—a complete examination of the ear, nose, and throat is in order, and an audiologic study is indicated, too, because mild hearing loss is often the only clearly determinable symptom.

Diagnosis

In serous otitis media, the nose and throat are essentially normal but the ear drum usually has a peculiar slate-blue coloration, with a loss of normal transparency and light reflex. In addition, the membrane may be fixed or retracted and, when pneumomassage is applied, immobile. Sometimes a definite fluid level can be seen through the membrane and if the fluid level is quite high, bubbles can be detected.

Tuning-fork tests done in quiet surroundings will establish or rule out the presence of a conductive or middle-ear hearing loss. In the Weber test, the sound will be heard better by the affected ear; the Rinne test will be negative. If audiometry is carried out, it will most often show a hearing loss that is greater in the lower and higher frequencies, with thresholds nearly normal at 2,000 cycles per sec-

ond. In the early stages of serous otitis media, there will be considerable variation in air-conduction threshold values as the patient tips his head in different positions. Bone conduction tests will be very stable, characterized by thresholds at minus 10 and even better, especially in children.

Diagnostic Myringotomy

Even in children whose drum membranes appear normal, a conductive hearing loss is sufficient justification for a diagnostic myringotomy and aspiration. Prompt and adequate treatment will bring dramatic improvement in hearing and a disappearance of the other physical symptoms. For infants and young children, myringotomy is done under general anesthesia. Older children and adults can be treated under local anesthesia in the office. The main thing to remember is that conservative treatment with more antibiotics, antihistamines, or vasoconstrictors has proved to be of little value. Nothing less than incision of the drum and complete removal of the fluid has been truly effective.

Sometimes the fluid aspirated is thin and straw colored; at others, it is thick and gummy and may resemble dark brown glue. The nature and consistency of the fluid appear to depend upon the exact stage of the disease process at which antibiotic treatment was begun; the later the treatment, the thicker the fluid. When treatment is started after pus has formed behind the eardrums, the fluid is especially thick and a considerable amount of suction is required to aspirate it. A single aspiration will usually cure "glue otitis media," but special care

must be taken to remove the fluid as completely as possible from the tympanic cavity.

Myringotomy and aspiration will cure serous otitis media most of the time. In some patients, however, fluid can re-form very quickly in spite of numerous aspirations, especially when large amounts of a thin, yellowish fluid are secreted. When thin serous fluid recurs after aspiration, the patient may require allergic study and management, as well as long-term medication and repeated aspiration

and drainage. In any event, discovery of these conditions should be followed by referral to an otologist in order to prevent development of a much more serious chronic ear disease.

So remember, whenever a hearing loss is suspected in a child by a parent or teacher, be on the lookout for serous otitis media. By detecting serous otitis media in its early stages and initiating prompt and effective treatment, you can spare the child the possible fate of untreatable deafness.

QUESTIONS AND ANSWERS

Q. *Since antibiotics can and do combat middle-ear infections effectively, what causes the formation and re-formation of fluid?*

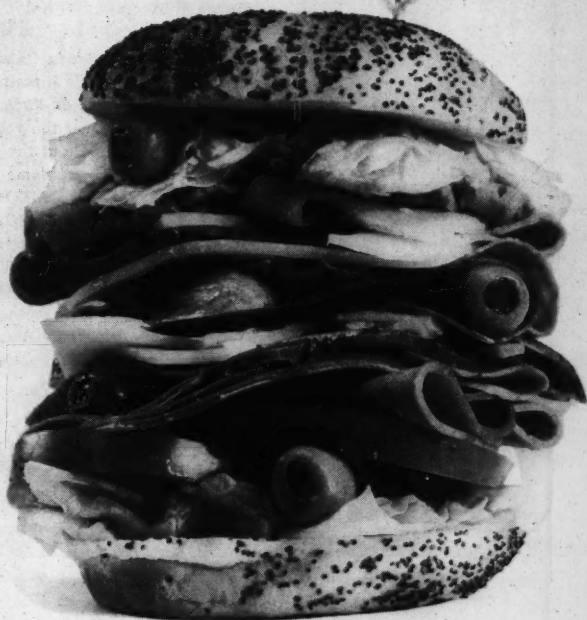
A. The physiologic basis for the disorder is not fully understood. After infection, tissue changes may occur in the middle-ear mucosa. Swelling of the lining of the eustachian tube results in inadequate exchange of gases from the middle ear to the nasopharynx. Eventually, because of absorption of oxygen from the trapped air, pressure is reduced in the middle ear. Negative pressure may cause the mucous membranes to "weep," secreting the clear, sterile fluid typical of early serous otitis media. It is also possible that other factors underlie the transudation of blood serum into the middle-ear space: there may be an allergic factor involved, or some kind of reaction in the ground substance. Current

studies at Temple University suggest that a metaplasia of the mucous glands in the middle ear may play a part in the development of serous otitis media.

Q. *Suppose the fluid re-forms after myringotomy; doesn't this negate the usefulness of the operation?*

A. A major contribution to otology was made by Beverly W. Armstrong, M.D., of Charlotte, N. C., who discovered that a small plastic 90-caliber polyethylene tube inserted in the myringotomy incision could act as a "secondary eustachian tube" and provide adequate ventilation. There is no drainage through the tube; it provides an airway so negative pressure does not develop and fluid does not form in the middle ear. To prevent re-formation of fluid, the tube can remain in place for six months or more without damaging the drum membrane.

outlet
for
anxiety?



"Inasmuch as the act of eating has a tranquilizing effect, the chief psychologic function of overeating seems to be to reduce anxiety."

Kaplan, H.I., et al.: New York J. Med. 57:2815.

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ESKATROL® SPANSULE®
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FORMULA: Each 'Eskatrol' *Spansule* sustained release capsule contains Dexedrine® (brand of dextro amphetamine sulfate), 15 mg., and Compazine® (brand of prochlorperazine), 7.5 mg., as the dimaleate, distributed among hundreds of minute pellets with varying disintegration times. A therapeutic dose is released promptly and the remaining medication, released gradually and without interruption, sustains the effect for 10 to 12 hours.

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RECOMMENDED DOSAGE: One 'Eskatrol' *Spansule* capsule daily, taken in the morning.

SIDE EFFECTS: Side effects (chiefly nervousness and insomnia) are infrequent, and usually mild and transitory.

CAUTIONS: Clinical experience has demonstrated that 'Eskatrol' (containing the phenothiazine derivative, 'Compazine') has a wide margin of safety and that there is little likelihood of blood or liver toxicity or neuromuscular reactions (extrapyramidal symptoms). The physician should be aware, however, of their possible occurrence.

'Eskatrol' *Spansule* capsules should be used with caution in the presence of severe hypertension, advanced cardiovascular disease, or extreme excitability.

AVAILABLE: In bottles of 30 and 250 capsules.

Prescribing information adopted Jan. 1961



SPECIAL FEATURE



J. Roswell Gallagher, M.D.
Harvard Medical School

J. Roswell Gallagher is Chief of the Adolescent Unit at the Children's Hospital Medical Center in Boston and Lecturer on Pediatrics in the Harvard Medical School. Over the years he has published numerous articles about the physiological, medical and emotional problems of adolescence, and has written two books, *MEDICAL CARE OF THE ADOLESCENT* and *EMOTIONAL PROBLEMS OF ADOLESCENTS* (with H. I. Harris). Dr. Gallagher is a member of the Committee on Health and Safety of the Boy Scouts of America. His professional affiliations include the American Pediatric Society, the American Academy of Pediatrics, and the American Public Health Association.

WAYS TO IMPROVE YOUR TREATMENT OF ADOLESCENTS

Most of the diseases that afflict adolescents differ very little, if at all, from those that occur at other periods of life, but we sometimes forget that *adolescents themselves* are different from younger and older people. Since basically we treat people, not diseases, we need to take into account the physiological and psychological differences of adolescents when we talk to, examine, think about, and prescribe for them. Adolescents aren't fragile, they don't need to be treated with kid gloves, but our treatment will be more effective for them and more satisfying to us if we consider their characteristics and needs.

Specifically, how do adolescents dif-

fer from other age groups? Except for the first year of infancy, humans grow and mature and change more rapidly during adolescence than at any other time of life. So the adolescent's requirement of far more food for growth has to be remembered when planning their diets. Because adolescents change so quickly, long-range predictions or prescriptions are inappropriate and often embarrassing for the doctor. Variations in rate and timing of growth are sources of self-consciousness and worry for boys and girls: those who do not grow or mature as rapidly or as much as their friends may become anxious.

There is rapid growth and change in

other respects than just the increases in height, weight, muscle, chest and shoulder width, and sexual maturity: the heart enlarges, inviting errors in diagnosis; the sebaceous glands increase, bringing acne and further self-consciousness; the pituitary-ovarian relationships change, possibly producing dysmenorrhea, metropathia, and amenorrhea, symptoms which usually have different connotations at this time of life than they do in the adult; gynecomastia and varicoceles are common, producing anxiety; and with the menarche, the status of a pre-existing mild anemia or polycythemia may change significantly. Finally, there is normally a considerable increase in resistance to infection during adolescence: this permits the doctor to revise earlier restrictions and prescriptions of rest. This is fortunate not only because of a normal youth's desire to be very active, but also because activities can bring him the success and recognition that help to build his confidence.

So much for their physiological characteristics. Adolescents differ psychologically from other age groups too. No other people are as interested in themselves (so they respond best to doctors who show an interest in *them* as well as in their hearts or acne or knees). They avidly seek recognition, are impatient, and change moods and attitudes rapidly. They readily interest themselves in, and strive to please, adults who seem to respect them and whom they admire (a source of aid to his therapy no doctor will wittingly ignore). Their troubles are near the surface (given half a chance they quickly pour them out). They become confused at times while they are attempting to gain the ability to become more independent, to develop suit-

able attitudes toward sex, to adjust their feelings toward their parents, to form an adult sort of conscience, and to develop ideas about what they want to do with their lives. These normal processes, school, anything wrong (or imagined to be wrong) with their bodies, and being accepted by their own age group are the major sources of their worries — and can be the basis of many of their symptoms.

These, briefly, are the characteristics that typical adolescents bring to their doctors — the physiological and psychological substrate of their symptoms and diseases. A few brief case comments may serve to illustrate how and why these matters should be taken into account.

See Them Alone—Listen

Although Bill was thirteen his mother seemed surprised when we suggested that he come in alone for his annual check-up: she had no special questions to ask, but had just assumed that she should bring him. It was quickly obvious how futile his visit might have been if she had been with him. Alone with his doctor and asked a few questions that encouraged him to talk about those matters that are important to boys (school, friends, activities, plans for the summer and the future) Bill soon began to ask questions of his own. "I wish you'd take a look at my back — it's been killing me this spring — it hurts to bend over. I suppose I should have mentioned it to the doctor who fixed my wrist last month, but my mother was there and he was talking to her most of the time — anyway if I'd mentioned it, she'd harp on it forever — and probably make me quit sports next fall. Can you do anything about it?"

These young people are no longer little children. They deserve and will respond to opportunities to gain independence. They like to — and need to — be treated confidentially and with respect. Your value to them will be compounded if you show interest in them, see them alone, and listen more than you talk.

Don't Rest—Strengthen

Bill's ability to bend forward was limited, raising his straightened leg was painful, but his spine x-ray was negative. After two weeks of aspirin, using a bedboard under his mattress, standing and sitting so as to keep his spine straight, and performing simple stretching exercises, he was sufficiently improved so that he could gradually begin to do load-resisting exercises which would strengthen the hyperextensors of his spine and his abdominal muscles.

Adolescents' skeletal growth and ambitions are often greater than their muscular development, so strains and sprains are common. Yet if some adolescents are not to be denied the acceptance and the successes which strenuous sports bring and which, in turn, yield them the confidence they need, they will need to be strengthened, not rested or permanently restricted. The back that aches or the knee that is weak, providing no condition (such as a meniscus tear or spondylolisthesis) exists which would prohibit it, ought to be strengthened to a point far beyond that at which the initial stress was harmful. Similarly, in the adolescent, the treatment of fatigability (when no infection or chronic disease is present) is usually gradually more exercise, not rest.

Changing Physiology, Not Fixed Pathology

Very frightened, 15-year-old Mary and her anxious mother consulted her doctor because her menstrual flow had persisted for 20 days. A few questions made it clear that her periods had been quite irregular for the previous year. Some had lasted for more than 10 days, but this one was the longest. Mary's complete blood count was normal, and her physical examination, which included a digital rectal (but not a vaginal) examination, revealed nothing of significance. With no further questioning or study (on the contrary, with every effort to lessen rather than increase her and her mother's anxiety) the probable cause of her difficulty was explained. She was given progesterone (Pranone®, 20 mg. b.i.d. for four days) and asked to report by telephone and to return within a few days.

In adolescents under 17, acyclic excessive menstrual bleeding (metrorrhagia hemorrhagica, not menorrhagia) is usually the result of their still immature cycle. They have not yet established a satisfactory reciprocal relationship between the pituitary's production of gonadotropins and the ovaries' production of estrogen and progesterone, so wide swings in estrogen level occur. When estrogen hits a very low level, the endometrium breaks down and bleeds. Once sure that the flows are irregular in timing and extent and that there is no evidence of chronic disease (leukemia, etc.), the doctor's major concern is to allay anxiety, not only for the patient's comfort but also to avoid coloring her reaction to menses and all things sexual with fear. To regard as probably metrorrhagia—and to treat

calmly, promptly, and with the minimum of tests and examinations and treatment at the first visit (unless there is severe anemia)—is to remember the physiologic characteristics and the psychologic needs of the young adolescent girl.

Am I Normal?

"Sixty-four inches. Is that normal?"; or "Whew, five feet six. Do you think I've stopped?"; or "They make fun of me—is everything all right?"; or "I'm glad to know what those bumps are—they had me worried. You're sure they'll go away?"—all those are commonplace questions from adolescents over-concerned with their heights, sexual maturity, or conditions such as gynecomastia. They are questions that aren't to be brushed off—and that require a thorough examination, and may require repeated reassurance. Their bodies; their sexuality (either femininity or masculinity); being "different" and therefore, in their eyes, possibly "abnormal"—are matters of great importance to them. Our genuine interest and evidence of our understanding of their concern, together with a few comments about normal variations in growth and the difference between not being average and being abnormal will reassure many. Others will need the added assurance offered by laboratory tests, a hand-wrist x-ray (for skeletal age determination), and your subsequent reference to height tables based on skeletal rather than on chronological age.

The important point to realize is how much more worry these growth differences generate in the adolescent than in the child or the adult.

People, Not Epileptics

Ed, though polite, had obviously been reluctant to keep the appointment his parents had made for him. Now 17, he had had epilepsy for three years, and though he had been to several good clinics his attacks were far from under control. "I don't think you can help me. The other doctors have tried about every pill there is. They ask me how many attacks I've had and then change the dose or give me another kind of medicine to try. I'm discouraged."

Effective as many anticonvulsants are, they aren't the whole answer. What this adolescent with epilepsy needed was a *chance to talk*—to talk about the sort of things which concern any 17-year-old (school, job, family, driving a car, marriage) not just about how many attacks he had had since the last visit. What chiefly bothered him was his inability to get and hold a job. If he told an employer he had epilepsy, he was usually turned down; if he lied, he was found out and fired. Would it always be like this? Could he ever get married?

This chance to talk—to ask questions and to put his worries into words—and help in getting a job were what he needed, not a change in medication. Relieved of much of his anxiety his attacks became less frequent, and this, in turn, relieved him further.

Feeling you have an interest in them, encouraging them to talk about the things which concern them, remembering the sort of matters which upset young people—all are of immeasurable value in treating the adolescent whether the ailment is epilepsy, acne, dysmenorrhea, or ulcerative colitis.

QUESTIONS AND ANSWERS

Q. *How would you be sure an exercise program was benefiting an adolescent whose initial complaint was easy fatigability?*

A. At brief subsequent visits—initially at weekly intervals—check your patient's weight and ask him about his ability to get to sleep quickly, whether or not his appetite for supper is good, if he seems to be able to do more and yet be less fatigued and to recover more quickly. At the same visit check his response to brief, strenuous exertion: the "step test" is a practical method.

Q. *Where can I learn more about suitable exercises?*

A. For general "conditioning" exercises: *HOW TO BE FIT*, by R. J. H. Kiphuth. New Haven: Yale University Press, 1942. For load-resisting (strengthening backs, knees, etc.): *PROGRESSIVE RESISTANCE EXERCISE* by T. L. De Lorme and A. L. Watkins. 245 pp. New York: Appleton-Century-Crofts, Inc., 1951.

Q. *How can you treat adolescents "confidentially"? Isn't it usually necessary to talk to the parents?*

A. Talk to parents first, to be sure you know their side of the story and understand what their questions are. Later, with the adolescent's knowledge—and perhaps in his presence—explain those mat-

ters which parents should know about. This need not divulge any "confidences" and certainly will not involve repeating what your patient has had to say. Furthermore, if the adolescent has an emotional or behavioral problem, many parents will themselves need help from you or a colleague.

Q. *Is there a way to estimate skeletal age other than by hand-wrist x-ray?*

A. The maturity rating, based on the status of secondary sexual characteristics, is a help in determining whether the adolescent's development is ahead of or behind the average for his chronological age.

Q. *Will a girl who has metropathia require more than the single 4-day course of progesterone?*

A. Yes. There is no reason to expect that she will quickly mature. The Pranone® should be given every 28 days (for 4 days) for about six months, or until she shows (by flowing at from 5-14 days after the progesterone instead of the usual two or three) that she has established her own mature cycle.

Q. *What books would be useful to the physician who treats adolescents?*

A. Some or all in the "Bookshelf" at the end of this article.

A BOOKSHELF ON ADOLESCENCE

GROWTH DIAGNOSIS: SELECTED METHODS FOR INTERPRETING AND PREDICTING PHYSICAL DEVELOPMENT FROM ONE YEAR TO MATURITY; Bayer, L. M., and Bayley N.; 1959. University of Chicago Press, 5750 Ellis Avenue, Chicago 37, Ill. (\$10.00)

THE ADOLESCENT IN YOUR FAMILY; Faegre, M. L.; 1955. (Publication #347) Dept. Health, Education & Welfare Publications, U.S. Govt. Printing Office, Washington 25, D. C. (25¢)

YOUR ADOLESCENT AT HOME AND IN SCHOOL; Frank, M., and Frank L. K.; 1956. Viking Press, 625 Madison Avenue, New York 22, N. Y. (\$3.95)

MEDICAL CARE OF THE ADOLESCENT; Gallagher, J. R.; 1960. Appleton-Century-Crofts, Inc., 35 West 32nd Street, New York 1, N. Y. (\$10.00)

EMOTIONAL PROBLEMS OF ADOLESCENTS; Gallagher, J. R., and Harris H. I.; 1958. Oxford University Press, 1600 Pollitt Drive, Fair Lawn, N. J. (\$3.50)

THE ADOLESCENT AND HIS WORLD; Josselyn, I. M.; 1957. Family Service Association of America, 44 East 23rd Street, New York 10, N. Y. (\$1.75)

GROWTH AT ADOLESCENCE; Tanner, J. M.; 1955. Charles C Thomas, Publisher, 301-327 East Lawrence Avenue, Springfield, Ill. (\$6.50)

DIAGNOSIS AND TREATMENT OF ENDOCRINE DISORDERS IN CHILDHOOD AND ADOLESCENCE; Wilkins, L.; 1957. Charles C Thomas, Publisher, 301-327 East Lawrence Avenue, Springfield, Ill. (\$17.50)

Daprisal[®]

rapidly relieves pain
in such conditions as

**Tension Headache
Severe Dysmenorrhea
Arthritis**



FORMULA: Each 'Daprisal' tablet contains amobarbital [Warning, may be habit forming], ½ gr. (32 mg.); aspirin, 2½ gr. (0.16 Gm.); phenacetin, 2½ gr. (0.16 Gm.); Dexedrine® Sulfate (brand of dextro amphetamine sulfate), 5 mg.

DOSAGE: 1 tablet every three hours as needed. (With light sleepers the final dose should not be taken so late in the day as to interfere with sleep.)

SIDE EFFECTS—insomnia, excitability and increased motor activity—are infrequent and ordinarily mild.

USE WITH CAUTION in patients hypersensitive to sympathomimetic compounds or barbiturates; in cases of coronary or cardiovascular disease; and in severe hypertension.

AVAILABLE: Unlike most analgesics, 'Daprisal' is available on prescription only. In bottles of 50.

Prescribing information
adopted January 1961.



Daprisal[®]



now she's living for more than food

When her mind is more on the joy of living than on the joy of eating, she will almost surely begin to lose weight. You can help accomplish this with 'Dexedrine' Spansule capsules.

For 'Dexedrine' does far more than just curb appetite; its profound and prolonged mood-lifting effect and its gentle stimulating action encourage a normal desire to "do things."

With 'Dexedrine' therapy, food is no longer your patient's primary consideration. Eating becomes secondary to new mental and physical activity, to new interests in a well-rounded life.

A single morning dose of 'Dexedrine' by 'Spansule' capsule controls appetite all day long.

DEXEDRINE® SPANSULE®

brand of dextro amphetamine sustained release capsules

INDICATIONS AND DOSAGE: For the following indications, the recommended daily dosage is up to 30 mg. of 'Dexedrine' by 'Spansule' capsule, usually taken in the morning: control of appetite in weight reduction; depressive states; alcoholism. In narcolepsy, the recommended daily dosage is up to 30 mg. of 'Dexedrine' by 'Spansule' capsule on arising.

SIDE EFFECTS: Insomnia, excitability and increased motor activity are infrequent and ordinarily mild.

CAUTIONS: Should be used with caution in patients hypersensitive to sympathomimetic compounds; in cases of coronary or cardiovascular disease; and in the presence of severe hypertension.

CONTRAINDICATIONS: Hyperexcitability; agitated pre-psychotic states.

SUPPLIED: 5 mg., 10 mg. and 15 mg. in bottles of 30. (Each capsule contains dextro amphetamine sulfate, 5 mg., 10 mg., or 15 mg.)

Prescribing information adopted January 1961.

Smith Kline & French Laboratories



THORAZINE® brand of chlorpromazine

PRESCRIBING INFORMATION

Tranquilizer • Antiemetic • Potentiator

The wide diversity of clinical applications in which 'Thorazine' is valuable, as either a specific or an adjuvant, is due to its three fundamental clinical properties: (1) its capacity to alleviate anxiety, tension and agitation without dulling mental acuity, (2) its ability to potentiate sedatives, narcotics and anesthetics, and (3) its profound antiemetic effect.

The tranquilizing effect of 'Thorazine' accounts for its usefulness in somatic conditions where emotional stress is a factor, as well as in mental and emotional disturbances *per se*.

INDICATIONS

The value of 'Thorazine' is established in the following conditions:

Moderate to severe mental and emotional disturbances of everyday practice, particularly those disturbances marked by agitation, tension, apprehension, excitement, or anxiety.

Somatic conditions complicated by emotional stress, such as arthritis, tuberculosis, severe tension headaches, gastrointestinal disorders, dermatologic conditions, status asthmaticus and severe asthma.

Hospitalized psychiatric patients, to control agitation, dispel delusions and hallucinations, and at the same time to restore or increase the patient's capacity to respond to psychotherapy.

Nausea, vomiting and hiccups, with dramatic results in severe and refractory cases.

Acute or chronic alcoholism, to control agitation, delirium tremens, and nausea and vomiting.

Cancer, as an adjuvant, to control apprehension, suffering due to pain, and nausea and vomiting.

Intractable pain, to reduce suffering and to potentiate narcotics or sedatives.

Obstetrics, as an adjuvant, to control apprehension, pain, and nausea and vomiting. 'Thorazine' allows a reduction in the amounts of the drugs ordinarily used in obstetrical management, thus lessening the risk of respiratory depression in mother and infant.

Surgery, as an adjuvant, to control anxiety and apprehension, pain, and nausea and vomiting; and to reduce by potentiation the amounts of narcotics, sedatives and anesthetics needed.

ADULT DOSAGE AND ADMINISTRATION

Dosage should always be adjusted to the response of the individual and the severity of the condition. It is important to increase dosage until symptoms are controlled or side effects become troublesome.

Mental and Emotional Disturbances of Everyday Practice—Depending on severity, *starting oral dosage* is 10 mg. t.i.d. or q.i.d., or 25 mg. b.i.d. or t.i.d. After a day or two, dosage may be increased by increments of 20 mg. to 50 mg. daily, at semi-weekly intervals (increase should be more gradual in emaciated or senile patients) until achieving maximum clinical response. Continue dosage at this level for at least two weeks; then it can usually be reduced to a maintenance level. A daily dosage of 200 mg. is "average," but in some cases, such as discharged mental patients, daily dosages as high as 800 mg. may be necessary. *Starting intramuscular dose* is 25 mg. (1 cc.). If necessary, and if no hypotension occurs, repeat the initial dose in one hour. Subsequent dosages should be oral, starting at 25 mg. to 50 mg. t.i.d.

Somatic Conditions Complicated by Emotional Stress—*Starting oral dosage* is 10 mg. to 25 mg. t.i.d. or q.i.d. Increase

gradually by 10 mg. to 25 mg. increments at semiweekly or weekly intervals. *Starting intramuscular dosage* is 25 mg. (1 cc.), repeated after one hour if necessary and if no hypotension occurs.

Hospitalized Psychiatric Patients—*Acutely agitated, manic, or disturbed patients*: *Starting intramuscular dose* is 25 mg. (1 cc.). If no marked hypotension occurs, an additional 25 mg. to 50 mg. injection may be given after one hour. Subsequent intramuscular dosages may be increased gradually over a period of several days—even up to 400 mg. q4-6h in exceptionally severe cases—until the patient is controlled. (In elderly or emaciated patients the dosage should be increased more slowly than in other patients.) Usually the patient becomes quiet and cooperative within 24 to 48 hours after the initial dose, at which time oral doses may gradually be substituted for intramuscular doses (mg. for mg. or higher). Even if control is not complete, oral doses may gradually replace intramuscular doses. During this period, oral dosage should be increased rapidly until the patient is calm. Usually an *oral dose* of 500 mg. a day is sufficient but, if necessary, the dosage may be gradually increased still further to 2,000 mg. a day or higher. *Less acutely agitated patients*: *Starting oral dose* is 25 mg. t.i.d. Subsequently, increase the amount gradually until an effective dosage is reached—usually 400 mg. daily is sufficient. *Duration of therapy*: It is important to determine the optimal dosage regimen and to continue treatment long enough for maximum clinical response. Maximum improvement is sometimes not apparent until after weeks or even months of therapy.

Nausea and Vomiting—*Starting oral dosage* is 10 mg. to 25 mg. q4-6h, p.r.n., and may be increased if necessary. *Starting intramuscular dose* is 25 mg. (1 cc.). If no hypotension occurs subsequent doses of 25 mg. to 50 mg. q3-4h, p.r.n., may be given until vomiting is checked. Then replace intramuscular administration with oral. *Starting rectal dose* is one 100 mg. suppository q6-8h, p.r.n. In some patients, one-half this dose may be sufficient.

Hiccups—*Starting oral dosage* is 25 mg. to 50 mg. t.i.d. or q.i.d. If after 2-3 days symptoms persist, an *intramuscular dosage* of 25 mg. to 50 mg. (1-2 cc.) may be used. *Use intravenous administration* only when symptoms still persist. By slow infusion, 25 mg. to 50 mg. (1-2 cc.) should be administered in 500 cc. to 1,000 cc. of physiologic saline solution, with the patient kept flat in bed. Follow blood pressure closely.

Alcoholism—*Severely agitated patients*: *Starting intramuscular dose* is 25 mg. to 50 mg. (1-2 cc.). Repeat initial dose if necessary and if no hypotension occurs. Start subsequent oral dosages at 25 mg. to 50 mg. t.i.d. *Agitated but manageable patients*: *Starting oral dose* is 50 mg., followed by 25 mg. to 50 mg. t.i.d. *Ambulatory patients with withdrawal symptoms or sober chronic alcoholics*: *Starting oral dose* is 10 mg. t.i.d. or q.i.d., or 25 mg. b.i.d. or t.i.d. Patients in a stuporous condition should be allowed to sleep off some of the effects of the alcohol before 'Thorazine' is administered.

Cancer and Pain—*Severe pain*: *starting intramuscular dosage* is 25 mg. (1 cc.) b.i.d. or t.i.d. *Milder pain*: *starting oral dosage* is 10 mg. t.i.d. or q.i.d., or 25 mg. b.i.d. or t.i.d. Because 'Thorazine' potentiates their action, reduce the dosage of narcotics or sedatives to $\frac{1}{4}$ to $\frac{1}{2}$ of the pre-'Thorazine' level.

Obstetrics—*Intramuscular dose* in labor and delivery is 12.5 mg. to 25 mg. (0.5-1 cc.), administered when dilation of the cervix reaches 3 to 5 centimeters or when strong labor is established. At the same time (but not mixed in the syringe with 'Thorazine'), $\frac{1}{4}$ to $\frac{1}{2}$ the usual dose of a narcotic or sedative and, if desired, 0.4 mg. of scopolamine may be administered. Depending upon blood pressure, respiration and the general condition of the patient, the initial 'Thorazine' dose (alone or with reduced amounts of the other agents) may be repeated in 3 to 5 hours if necessary.

Surgery (Adults)—*Preoperatively*, oral dose is 25 mg. to 50 mg., 2 to 3 hours before the operation. *Intramuscular dose* is 12.5 mg. to 25 mg. (0.5-1 cc.), 1 to 2 hours before the operation. *During surgery* 'Thorazine' should be administered only if needed to control nausea and vomiting, retching, hiccups, or other acute symptoms. *Intramuscular dose* is 12.5 mg. (0.5 cc.), repeated in $\frac{1}{2}$ hour if necessary and if no hypotension occurs.

Intravenous dose should be no more than 2 mg. per fractional injection, with injections at not less than 2-minute intervals. Also, it should not exceed 25 mg. 'Thorazine' should be diluted to 1 mg./cc. (1 cc. mixed with 24 cc. of physiologic saline solution). *Postoperatively, oral dosage* is 10 mg. to 25 mg. q4-6h, p.r.n. *Intramuscular dosage* is 12.5 mg. to 25 mg. (0.5-1 cc.), repeated in one hour if necessary and if no hypotension occurs.

PEDIATRIC DOSAGE AND ADMINISTRATION

Nausea and Vomiting, Behavior Disorders and Pain — *Oral dosage* is on the basis of $\frac{1}{4}$ mg./lb. of body weight q4-6h, until symptoms are controlled (i.e., for 40 lb. child—10 mg. q4-6h). Calculate 'Thorazine' Syrup dosage at 10 mg./5 cc. tsp. *Rectal dosage* is on the basis of $\frac{1}{2}$ mg./lb. of body weight q6-8h, p.r.n. (i.e., for 20-30 lb. child—half of a 25 mg. suppository q6-8h). *Intramuscular dosage* is on the basis of $\frac{1}{4}$ mg./lb. of body weight q6-8h, p.r.n. In children up to 5 years (or 50 lbs.)—not over 40 mg./day. In children 5-12 years (or 50-100 lbs.)—not over 75 mg./day.

Pain—Because 'Thorazine' potentiates the action of narcotics and sedatives, reduce the dosage of these agents to $\frac{1}{4}$ to $\frac{1}{2}$ of the pre-'Thorazine' level.

Behavior Disorders—In severe cases, 50-100 mg. daily has been used and, in older children, 200 mg. or more daily may be required.

Surgery (Children) — *Preoperatively*, dose is on the basis of $\frac{1}{4}$ mg./lb. of body weight given either orally 2 to 3 hours before the operation, or intramuscularly 1 to 2 hours before. *During surgery*, the dose is on the basis of $\frac{1}{4}$ mg./lb. of body weight, repeated in $\frac{1}{2}$ hour if necessary and if no hypotension occurs. The intravenous dose should be no more than 1 mg. per fractional injection, with injections at not less than 2-minute intervals. Intravenous dosage during surgery should not exceed recommended intramuscular dosage and should always be diluted to 1 mg./cc. *Postoperatively*, dosage is on the basis of $\frac{1}{4}$ mg./lb. of body weight, either orally q4-6h, p.r.n., or intramuscularly, a single dose repeated in one hour if necessary and if no hypotension occurs.

NOTES ON PARENTERAL ADMINISTRATION

Except for acute ambulatory cases, parenteral administration should generally be reserved for bedfast patients. Parenteral administration should always be made with the patient lying down and remaining so for at least $\frac{1}{2}$ hour afterward because of possible hypotensive effects. The injection should be given slowly, deep into the upper outer quadrant of the buttock. If irritation and pain at the site of injection are problems, dilution of 'Thorazine' Injection with physiologic saline solution or 2% procaine solution may be helpful. Subcutaneous administration is not advisable, and care should be taken to avoid injecting undiluted 'Thorazine' Injection into a vein. Intravenous administration is recommended only for severe hiccups and surgery. Because contact dermatitis has been reported, avoid getting the solution on hands or clothing.

SIDE EFFECTS

The drowsiness caused by 'Thorazine' may be unwanted in some patients. It is usually mild to moderate and disappears after the first or second week of therapy. If, however, drowsiness is troublesome, it can usually be controlled by lowering the dosage or by administering small amounts of dextro amphetamine.

Other side effects that have been reported occasionally are dryness of the mouth, nasal congestion, some constipation, miosis in a few patients and, very rarely, mydriasis. Mild fever (99°F.) may occur occasionally during the first days of therapy with large intramuscular doses. During 'Thorazine' therapy some patients have an increased appetite and gain weight. Usually these patients reach a plateau beyond which they do not gain further weight.

CAUTIONS

Jaundice: In the more than 14 million patients who have been treated with 'Thorazine' in the United States, the incidence of jaundice—regardless of indication, dosage, or mode of administration—has been low. Few cases have occurred in less than one week or after six weeks. Jaundice due to 'Thorazine' is of the so-called "obstructive" type; is without parenchymal damage; and is usually promptly reversible upon the withdrawal of 'Thorazine'. Because detailed liver function tests of 'Thorazine'-induced jaundice give a picture which mimics extrahepatic obstruction, exploratory laparotomy should be withheld until sufficient studies confirm extrahepatic obstruction.

Agranulocytosis: Agranulocytosis, although rare, has been reported in patients on 'Thorazine' therapy. Patients receiving 'Thorazine' should be observed regularly and asked to report at once the sudden appearance of sore throat or other signs of infection. If white blood counts and differential smears give an indication of cellular depression, the drug should be discontinued, and antibiotic and other suitable therapy should be instituted. Because most reported cases have occurred between the fourth and the tenth weeks of treatment, patients on prolonged therapy should be observed particularly during that period.

A moderate suppression of total white blood cells is sometimes observed in patients on 'Thorazine' therapy. If not accompanied by other symptoms, it is not an indication for discontinuing 'Thorazine'.

Potentiation: 'Thorazine' prolongs and intensifies the action of many central nervous system depressants, such as barbiturates and narcotics. Consequently, it is advisable to stop administration of such depressants before initiating 'Thorazine' therapy. Later the depressant agents may be reinstated, starting with low doses, and increasing according to response. Approximately $\frac{1}{4}$ to $\frac{1}{2}$ the usual dosage of such agents is required when they are given in combination with 'Thorazine'. (However, 'Thorazine' does not potentiate the anticonvulsant action of barbiturates. In patients who are receiving anticonvulsants, the dosage of these agents—including barbiturates—should not be reduced if 'Thorazine' is started. Rather, 'Thorazine' should be started at a very low dosage and increased, if necessary.)

Hypotensive Effect: Postural hypotension and simple tachycardia may be noted in some patients. In these patients, momentary fainting and some dizziness are characteristic and usually occur shortly after the first parenteral dose, occasionally after a subsequent parenteral dose—very rarely after the first oral dose. In most cases, prompt recovery is spontaneous and all symptoms disappear within $\frac{1}{2}$ to 2 hours with no subsequent ill effects. Occasionally, however, this hypotensive effect may be more severe and prolonged, producing a shock-like condition. In consideration of possible hypotensive effects, the patient should be kept under observation (preferably lying down) for some time after the initial parenteral dose. If, on rare occasions, hypotension does occur, it can ordinarily be controlled by placing the patient in a recumbent position with head lowered and legs raised. If it is desirable to administer a vasoconstrictor, 'Levophed' and 'Neo-Synephrine' are the most suitable. Other pressor agents, including epinephrine, are not recommended because phenothiazine derivatives may reverse the usual elevating action of these agents and cause a further lowering of blood pressure.

Antiemetic Effect: The physician should always bear in mind that the antiemetic effect of 'Thorazine' may mask signs of overdosage of toxic drugs and may obscure diagnosis of conditions such as intestinal obstruction and brain tumor.

Dermatological Reactions: Dermatological reactions have been reported. Most have been of a mild urticarial type, suggesting allergic origin. Some of them appear to be due to photosensitivity, and it is advisable that patients on 'Thorazine' avoid undue exposure to the summer sun.

Neuromuscular Reactions: With very large doses of 'Thorazine', as frequently used in psychiatric cases over long periods, there have been a few patients who have exhibited neuromuscu-

*'Levophed' and 'Neo-Synephrine' are the trademarks (Reg. U.S. Pat. Off.) of Winthrop Laboratories for its brands of levarterenol and phenylephrine respectively.

lar reactions (extrapyramidal symptoms) which closely resemble parkinsonism. Such symptoms are reversible and usually disappear within a short time after the dosage has been decreased or the drug withdrawn. These neuromuscular reactions can also be controlled by the concomitant administration of standard anti-parkinsonism agents.

Lactation: Moderate engorgement of the breast with lactation has been observed in female patients receiving very large doses of 'Thorazine'. This, however, is a transitory condition which disappears on reduction of dosage or withdrawal of the drug.

CONTRAINDICATIONS

In comatose states due to central nervous system depressants (alcohol, barbiturates, narcotics, etc.), and also in patients under the influence of large amounts of barbiturates or narcotics.

AVAILABLE

Tablets, 10 mg., 25 mg., 50 mg. and 100 mg., in bottles of 50, 500 and 5000; 200 mg., for use in mental hospitals, in bottles of 500 and 5000. (Each tablet contains chlorpromazine hydrochloride, 10 mg., 25 mg., 50 mg., 100 mg., or 200 mg.)

Ampuls, 1 cc. and 2 cc. (25 mg./cc.), in boxes of 6, 100 and 500. (Each cc. contains, in aqueous solution, chlorpromazine hydrochloride, 25 mg.; ascorbic acid, 2 mg.; sodium bisulfite, 1 mg.; sodium sulfite, 1 mg.; sodium chloride, 6 mg.)

Multiple-dose Vials, 10 cc. (25 mg./cc.), in boxes of 1, 20 and 100. (Each cc. contains, in aqueous solution, chlorpromazine hydrochloride, 25 mg.; ascorbic acid, 2 mg.; sodium bisulfite, 1 mg.; sodium sulfite, 1 mg.; sodium chloride, 1 mg. Contains benzyl alcohol, 2%, as preservative).

Spansule® capsules, 30 mg., 75 mg., 150 mg. and 200 mg., in bottles of 30, 250 and 1500; also 300 mg., in bottles of 30 and 1500. (Each 'Spansule' capsule contains chlorpromazine hydrochloride, 30 mg., 75 mg., 150 mg., 200 mg., or 300 mg.)

Syrup, 10 mg./teaspoonful (5 cc.), in 4 fl. oz. bottles. (Each 5 cc. contains chlorpromazine hydrochloride, 10 mg.)

Suppositories, 25 mg. and 100 mg., in boxes of 6. (Each suppository contains chlorpromazine, 25 mg. or 100 mg.; glycerin, glyceryl monopalmitate, glyceryl monostearate, hydrogenated coconut oil fatty acids, hydrogenated palm kernel oil fatty acids, lecithin.)

Concentrate (for hospital use), 30 mg./cc., in 4 fl. oz. bottles, packages of 12 and 36; and in 1 gal. bottles. (Each cc. contains chlorpromazine hydrochloride, 30 mg.)

Prescribing information adopted January, 1961

COMPazine® brand of prochlorperazine

PRESCRIBING INFORMATION

Antiemetic • Tranquilizer

'Compazine' provides a beneficial calming effect and prompt antiemetic action with unusual freedom from drowsiness and depressing effect. Clinical experience in several million patients has shown 'Compazine' to be promptly effective in low dosage, with minimal side effects in the dosage range recommended for everyday practice.

INDICATIONS

1. **Anxiety, tension, agitation,** confusion, chronic alcoholism and behavior disorders in children.

2. **Emotional stress associated with somatic conditions** such as g.i. disorders, cardiovascular conditions, hypertension, menopause, premenstrual tension, neurodermatitis, arthritis, asthma, cancer, tuberculosis and tension headache.

3. **Nausea and vomiting of widely varying causes** such as pregnancy, postoperative conditions, viral gastroenteritis and other infectious conditions, irradiation therapy and motion

sickness. In most patients, relief is provided within a short time after one oral dose.

4. **In surgery and obstetrics** to prevent or control: (a) nausea, vomiting and retching; and (b) fear, tension and restlessness.

5. **In psychiatry** to control agitation, anxiety, tension and confusion that may be seen in psychotic states.

ADMINISTRATION AND USUAL DOSAGE

Dosage should be determined according to the severity of the condition and the response of the patient. It is important to begin therapy with the lowest recommended dosage. In hospitalized patients or those under adequate supervision, higher doses may be indicated.

USUAL ADULT DOSAGE

Tablets: The usual starting dosage is 5 mg. three or four times daily. Some patients will respond better when subsequent dosage is raised to 10 mg. t.i.d. or q.i.d. Dosage over 40 mg. daily should be used only in resistant cases.

Spansule® sustained release capsules: The usual starting dosage is one 15 mg. 'Spansule' capsule taken upon arising, or one 10 mg. 'Spansule' capsule in the morning and evening. Some patients may subsequently require dosage increased to one 30 mg. capsule in the morning. Dosage over 40 mg. daily should be used only in resistant cases. (B.i.d. dosage of the 30 mg. capsule should be limited to severe cases.)

Dosage recommendations for other oral forms of 'Compazine' may be applied to 'Compazine' Spansule capsules on the basis of the total daily dose in milligrams. (For example: one 15 mg. 'Compazine' Spansule capsule replaces 5 mg. 'Compazine' Tablets, t.i.d.) All strengths have the same duration of action. They differ only in intensity of therapeutic effect.

In "morning sickness" of pregnancy, one 'Compazine' Spansule capsule taken before retiring affords antiemetic activity throughout the night and into the morning, thus protecting against "morning sickness."

The 15 mg. 'Compazine' Spansule capsule is ideal for once-a-day administration. The 10 mg. 'Compazine' Spansule capsule is ideal for twice-a-day (q12h) administration.

Syrup: 5 mg. to 10 mg. (1 to 2 teaspoonfuls) three or four times daily.

Suppositories: Usual dosage in adults is one 25 mg. 'Compazine' Suppository twice daily.

Injection: Total parenteral dosage in 24 hours should not exceed 40 mg.

For intramuscular administration, an initial dose of 5 mg. to 10 mg. (1 to 2 cc.) of 'Compazine' Injection should be injected deeply into the upper outer quadrant of the buttock. Repeat, if necessary, at intervals of 3 to 4 hours. Pain at the site of injection has not been a problem. **For intravenous administration,** see surgery section. Dilution is not required. **Subcutaneous administration** is not advisable because of local irritation.

It is recommended that 'Compazine' Injection not be mixed with other agents in the syringe.

Dermatitis due to contact with 'Compazine' has not been a problem. However, it is recommended that nurses or others giving frequent injections take precautions to avoid getting the solution on their hands or clothing.

'Compazine' Injection should be protected from light, since exposure may cause discoloration. Slight yellowish discoloration will not significantly alter the potency or therapeutic efficacy. However, if markedly discolored, the solution should be discarded.

IN SURGERY (Adults)

ROUTE	DOSAGE
preoperatively	
Intramuscular injection	5 mg. to 10 mg. (1-2 cc.)

1 to 2 hours before induction of anesthesia. Repeat once in 30 minutes if necessary.

ROUTE	DOSAGE
Intravenous injection	5 mg. to 10 mg. (1-2 cc.)

15 to 30 minutes before induction of anesthesia.

Intravenous infusion	20 mg. (4 cc.) per liter of isotonic solution
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Add to I.V. infusion 15 to 30 minutes before induction. Repeat once if necessary.

during surgery	
Intramuscular or Intravenous injection	5 mg. to 10 mg. (1-2 cc.)

When needed to control acute symptoms. Repeat once if necessary.

postoperatively

To prevent anxiety, nausea, vomiting, or emergence excitement, add to I.V. infusion: 20 mg. (4 cc.) per liter of isotonic solution.

For immediate control of acute nausea, vomiting, retching, or emergence excitement, inject 5 mg. to 10 mg. (1-2 cc.), I.V. or I.M. Repeat once if necessary.

IN OBSTETRICS

'Compazine' dosage should be adjusted to the individual patient and her condition in accordance with the general use of the drug (i.e., 5 mg. to 10 mg. per dose; 15 mg. to 40 mg. per day). The following dosage suggestions should prove satisfactory for the majority of obstetric patients.

To relieve anxiety or prevent vomiting during the first stage of labor, the usual dosage is 10 mg. of 'Compazine' by intramuscular injection. As labor progresses, or if it is prolonged, subsequent 10 mg. doses may be administered as needed. The total daily dose need rarely exceed 30 mg.

To control postpartum anxiety or nausea and vomiting, the usual total daily dose of 'Compazine' is 15 mg. to 30 mg. administered orally or intramuscularly.

NOTE: 'Compazine' has no clinically significant potentiating effect on narcotics, anesthetics, or sedatives. However, because the 'Compazine' patient is calm and relaxed, it is sometimes possible to produce satisfactory analgesia with less than the customary amounts of these agents. This lack of potentiating effect also minimizes the risk of intensifying or prolonging the effect of residual anesthetics and other depressant agents used in surgery or labor and delivery.

As with intravenous administration of any surgical or obstetric adjuvant, the increased possibility of hypotension should be kept in mind if 'Compazine' is administered by either intravenous injection or infusion.

USUAL CHILDREN'S DOSAGE

It is important always to use the lowest effective dosage, because as dosage is raised the possibility of side effects increases. There have been occasional cases of neuromuscular reactions (extrapyramidal symptoms) in children. These have been transitory and reversible.

Nausea and vomiting are usually controlled during the first day of therapy. Therefore more than one day's therapy is seldom necessary.

Weight	Dosage	Not to exceed
Under 20 lbs.	not recommended	
20-29 lbs.	2.5 mg. once or twice a day	7.5 mg. per day
30-39 lbs.	2.5 mg. b.i.d. or t.i.d.	10.0 mg. per day
40-85 lbs.	2.5 mg. t.i.d. or 5 mg. b.i.d.	15.0 mg. per day

For behavior disorders, dosage may be increased gradually, if necessary, within the following daily limits:

2 to 6 years of age: Total daily dose should not exceed 20 mg.
6 to 12 years of age: Total daily dose should not exceed 25 mg.

For rapid control of nausea and vomiting or behavior disorders:

Injection: For children under 12 years of age, each dose should be calculated on the basis of 0.06 mg. of 'Compazine' per pound of body weight and should be administered by deep intramuscular injection. For example, a 40-pound child would receive an injection of 2.5 mg. (0.5 cc.). Control is usually obtained with a single dose.

'COMPAZINE' IN PSYCHIATRY

'Compazine' is indicated for control of agitation, anxiety, tension and confusion that may be seen in such conditions as schizophrenias; manic-depressive states, manic phase; severe personality disorders; involuntal psychoses; degenerative conditions; and senile psychoses.

ADULTS

Oral psychiatric dosage: In relatively mild conditions, as may be seen in private psychiatric practice or on outpatient clinics, the suggested starting dosage is 5 mg. t.i.d. or q.i.d. Some patients will respond better when subsequent dosage is raised to 10 mg. t.i.d. or q.i.d. In moderate or severe conditions, when patients are either hospitalized or under adequate supervision, the suggested starting dosage is 10 mg. t.i.d. or q.i.d. Dosage should be increased gradually until symptoms are controlled or side effects become bothersome. Experience has shown that when dosage is increased gradually (by small increments every two or three days) side effects either do not occur or are easily controlled.

Some patients will obtain satisfactory results on 50 mg. to 75 mg. of 'Compazine' daily. In more severe disturbances, the optimum dosage in most patients is 100 mg. to 150 mg. daily. With oral administration, response ordinarily becomes evident within a day or two. Longer periods of treatment are usually required before maximal improvement is obtained.

I.M. psychiatric dosage: For immediate control of severely disturbed adult patients, an initial dose of 10 mg. to 20 mg. (2-4 cc.) should be injected deeply into the upper outer quadrant of the buttock. If necessary, this dose should be repeated every 2 to 4 hours to gain control of the patient. Patients often respond shortly after the first injection. In resistant cases, the initial dose may be repeated hourly. More than three or four doses are seldom necessary. If, in rare cases, parenteral medication is indicated over a prolonged period, 10 mg. to 20 mg. (2-4 cc.) at 4- to 6-hour intervals is the usual dosage. Pain and irritation at the site of injection have rarely been encountered and some patients have been given the drug intramuscularly for periods of several weeks. After control is achieved by intramuscular administration, most patients can be switched to an oral form of the drug at the same dosage level or higher.

CHILDREN (2 to 12 years)

Oral psychiatric dosage: The suggested children's starting dosage in psychiatry is 2.5 mg. (½ teaspoonful of syrup) two or three times daily, or 5 mg. (one teaspoonful of syrup or one 5 mg. tablet) twice daily, according to body weight. During the first day, the total daily dose should not exceed 10 mg. Dosage is then increased according to the patient's response. (2.5 mg. and 5 mg. suppositories are also available.)

For ages 2 to 6, the total daily dosage usually does not exceed 20 mg. For ages 6 to 12, the total daily dosage usually does not exceed 25 mg. Because extrapyramidal symptoms have been reported in children as well as in adults, it is important to use the lowest effective dosage.

SIDE EFFECTS

In the dosage range recommended for everyday practice, side effects have been infrequent, transitory and usually mild. A few patients may experience a mild drowsiness when first taking 'Compazine'. There may also be occasional cases of dizziness,

skin reaction and neuromuscular reactions (extrapyramidal symptoms); rarely, hypotension.

Neuromuscular Reactions

Occasionally, neuromuscular reactions (extrapyramidal symptoms) have been observed with 'Compazine' therapy. It is important, therefore, to use the lowest effective dosage, because as dosage is raised the possibility of these reactions increases.

Motor Restlessness: A few patients on 'Compazine'—particularly those in whom dosage has been raised to higher levels—may experience a transient unpleasant stimulation or jitteriness, characterized by restlessness and insomnia. The dosage of 'Compazine' should not be increased while these side effects are present. Patients should be reassured that such effects are temporary and will disappear spontaneously. In those cases where the symptoms are particularly bothersome, reduction of dosage or the concomitant administration of a sedative may be helpful.

Dystonias: These neuromuscular reactions are seen in a significant percentage of hospitalized mental patients on high dosages. The muscles of the face and shoulder girdle may be selectively involved. Symptoms observed have included spasm of the neck muscles, extensor rigidity of back muscles, carpopedal spasm, eyes rolled back, trismus and swallowing difficulty. Despite some similarity to symptoms of serious neurologic disorders, these reactions are usually promptly reversible by temporary discontinuance of 'Compazine' therapy and administration of a sedative such as phenobarbital. The dosage and route of administration should be determined according to the severity of the symptoms. Patients should be reassured that the symptoms are transitory. Depending on the severity of the dystonia, suitable supportive measures, such as maintaining a clear airway and adequate hydration, should be employed. Note: It has been reported that injectable administration of Benadryl* may also be helpful.

Pseudo-parkinsonism: These neuromuscular reactions may resemble the classic parkinsonism syndrome. Treatment should include temporary discontinuance of 'Compazine' therapy and the administration of any standard anti-parkinsonism agent (see PDR). Patients should also be reassured that these symptoms are transitory. Depending on the severity of symptoms, suitable supportive measures, such as maintaining a clear airway and adequate hydration, should be employed.

CAUTIONS

Clinical experience has demonstrated that 'Compazine', a phenothiazine derivative, has a wide margin of safety and that there is little likelihood of blood or liver toxicity. The physician should be aware, however, of their possible occurrence.

The antiemetic action of 'Compazine' may mask signs of overdosage of toxic drugs or may obscure the diagnosis of conditions such as intestinal obstruction and brain tumor.

'Compazine' has no clinically significant potentiating action. However, if depressant agents are used in conjunction with this drug, the possibility of an additive effect should be kept in mind.

CONTRAINDICATIONS

'Compazine' is contraindicated in comatose or greatly depressed states due to central nervous system depressants.

AVAILABLE

There is a dosage form of 'Compazine' for every medical need. Tablets, 5 mg. and 10 mg. and, for use in psychiatry, 25 mg., in bottles of 50, 500 and 5000. Each tablet contains 5 mg., 10 mg., or 25 mg. of prochlorperazine as the dimaleate.

'Spansule' capsules, 10 mg., 15 mg. and 30 mg., in bottles of 30, 250 and 1500; and, for use in psychiatry, 75 mg., in bottles of 30 and 1500. Each capsule contains 10 mg., 15 mg., 30 mg., or 75 mg. of prochlorperazine as the dimaleate.

Ampuls, 2 cc. (5 mg./cc.), in boxes of 6, 100 and 500. Each cc. contains, in aqueous solution: 5 mg. prochlorperazine as the

ethanedisulfonate, 1 mg. sodium sulfite, 1 mg. sodium bisulfite, 8 mg. sodium phosphate and 12 mg. sodium biphosphate.

Multiple-dose Vials, 10 cc. (5 mg./cc.), in boxes of 1, 20 and 100. Each cc. contains, in aqueous solution: 5 mg. prochlorperazine as the ethanedisulfonate, 5 mg. sodium biphosphate, 12 mg. sodium tartrate, 0.9 mg. of sodium saccharin and 0.75% benzyl alcohol as preservative.

Suppositories, 2½ mg. (for young children), 5 mg. (for older children) and 25 mg. (for adults), in boxes of 6. Each suppository contains: 2½ mg., 5 mg., or 25 mg. of prochlorperazine with glycerin, glyceryl monopalmitate, glyceryl monostearate, hydrogenated coconut oil fatty acids, hydrogenated palm kernel oil fatty acids and lecithin.

Syrup, 5 mg./teaspoonful (5 cc.), in 4 fl. oz. bottles. Each 5 cc. contains 5 mg. of prochlorperazine as the ethanedisulfonate.

Concentrate (for hospital use), 10 mg./cc. in 4 fl. oz. bottles, cartons of 12 and 36. Each cc. contains 10 mg. of prochlorperazine as the ethanedisulfonate.

Prescribing information also available in *Compazine® Reference Manual, Physicians' Desk Reference*, or from your SK&F representative or your pharmacist.

Prescribing information adopted January 1961.

STELAZINE®
brand of trifluoperazine

PRESCRIBING INFORMATION

INDICATIONS

In general practice and in psychiatry 'Stelazine' is outstanding among tranquilizers because it relieves anxiety, agitation and tension—without sedation. Nor does it cause euphoria. 'Stelazine' is also effective in relieving anxiety either accompanying or causing somatic conditions. Where anorexia and insomnia are problems, 'Stelazine' usually produces a marked improvement in appetite and sleep patterns.

'Stelazine' provides a fast therapeutic response. On a convenient b.i.d. dosage regimen, many patients who have failed to respond to other agents, or have responded only poorly, are promptly relieved of their symptoms. With symptoms allayed, rapport with the physician is facilitated, and patients are more receptive to counselling or psychotherapy.

In hospitalized psychiatric patients 'Stelazine' produces rapid response in many diagnostic categories. These include acute and chronic schizophrenias, manic-depressive psychoses, involutional psychoses, chronic brain syndrome and mental deficiency.

'Stelazine' can combat psychotic symptoms without causing drowsiness. It can quiet hyperactive patients and activate withdrawn patients, and it has a marked beneficial effect on delusions and hallucinations.

'Stelazine' can rapidly terminate acute psychotic episodes. On the admissions service, intensive 'Stelazine' therapy often results in early discharges.

Also noteworthy is the effectiveness of 'Stelazine' in the treatment of hard-core, chronic and refractory schizophrenics. When administered to a group of such patients, it characteristically produces significant improvement in at least 30% to 40% of them.

ADMINISTRATION AND DOSAGE

Dosage of 'Stelazine' should be adjusted to the needs of the individual.

*Trademark Reg. U.S. Pat. Off.: 'Benadryl' for diphenhydramine hydrochloride, Parke-Davis.

1. Adult Dosage for Use in Everyday Practice

The recommended dosage is 1 mg. or 2 mg. twice daily. In everyday practice, optimal results are usually achieved within this range, so that it is seldom necessary to exceed 4 mg. daily.

Because of the inherent long action of 'Stelazine', patients may be controlled on convenient b.i.d. administration; some patients may be maintained on once-a-day administration.

2. Adult Dosage for Use in Psychiatric Practice

oral (for office patients and outpatients with anxiety): The usual starting dosage is 1 mg. or 2 mg. b.i.d. In the treatment of these patients, it is seldom necessary to exceed 4 mg. a day. (Some patients with more severe disturbances, and discharged mental patients, may require higher dosages.) In some patients, maintenance dosage can be reduced to once-a-day administration.

oral (for patients who are either hospitalized or under adequate supervision): The usual starting dosage is 2 mg. to 5 mg. b.i.d. (Small or emaciated patients should always be started on the lower dosage.)

The majority of patients will show optimum response on 15 mg. or 20 mg. daily, although a few may require 40 mg. a day or more. It is important to give doses that are high enough for long enough periods of time—especially in chronic patients.

Optimum therapeutic dosage levels should be reached within two or three weeks after the start of therapy. When maximum therapeutic response is achieved, dosage may be reduced gradually to a satisfactory maintenance level.

intramuscular (for prompt control of severe symptoms): The usual dosage is 1 mg. to 2 mg. ($\frac{1}{2}$ -1 cc.) by deep intramuscular injection q4-6h, p.r.n. More than 6 mg. within 24 hours is rarely necessary. As soon as a satisfactory response is observed, oral medication should be substituted at the same dosage level or slightly higher.

Only in very exceptional cases should intramuscular dosage exceed 10 mg. within 24 hours. Since 'Stelazine' has a relatively long duration of action, injections should not be given at intervals of less than 4 hours because of the possibility of an excessive cumulative effect.

'Stelazine' Injection has been exceptionally well tolerated; there is little, if any, pain and irritation at the site of injection.

3. Dosage for Psychotic and Mentally Defective Children

The dosages given below apply to children, ages 6 to 12, who are either hospitalized or under adequate supervision.

oral: The starting dosage is 1 mg. administered once a day or b.i.d., depending on the size of the child. Dosage may be increased gradually until symptoms are controlled or until side effects become troublesome. Both the rate and the amount of dosage increases should be carefully adjusted to the size of the child and the severity of the symptoms, and the lowest effective dosage should always be used. Once control is achieved, it is usually possible to reduce dosage to a satisfactory maintenance level.

In most cases, it is not necessary to exceed 15 mg. of 'Stelazine' daily. However, some older children with severe symptoms may require, and be able to tolerate, higher dosages.

intramuscular: There has been little experience with the use of 'Stelazine' Injection in children. However, if it is necessary to achieve rapid control of severe symptoms, 1 mg. ($\frac{1}{2}$ cc.) of 'Stelazine' may be administered intramuscularly once or twice a day, depending on the size of the child. Once control is achieved, usually after the first day, the oral dosage form of 'Stelazine' should be substituted for the Injection.

SIDE EFFECTS

In the dosage range of 2-4 mg. daily, side effects from 'Stelazine' are infrequent. When they do occur, they are usually slight and transitory. Mild drowsiness occurs in a small percentage of patients; this usually disappears after a day or two

of 'Stelazine' therapy. There are occasional cases of dizziness, mild skin reaction, dry mouth, insomnia and fatigue; rarely, neuromuscular (extrapyramidal) reactions.

In hospitalized psychiatric patients receiving daily 'Stelazine' dosages of 10 mg. or more, clinical experience has shown that, when side effects occur, their appearance is usually restricted to the first two or three weeks of therapy. After this initial period, they appear infrequently, even in the course of prolonged therapy. Termination of 'Stelazine' therapy because of side effects is rarely necessary.

Side effects observed include dizziness, muscular weakness, extrapyramidal symptoms, anorexia, rash, lactation and blurred vision. Drowsiness has occurred, but has been transient, usually disappearing in a day or two.

Neuromuscular (Extrapyramidal) Reactions

These symptoms are seen in a significant number of hospitalized mental patients receiving 'Stelazine'. They may be characterized by motor restlessness, by the dystonic type, or they may resemble parkinsonism.

motor restlessness: Some patients may experience an initial transient period of stimulation or jitteriness, chiefly characterized by motor restlessness and sometimes insomnia. These patients should be reassured that this effect is temporary and will disappear spontaneously. The dosage of 'Stelazine' should not be increased while these side effects are present.

If this turbulent phase becomes too troublesome, the symptoms can be controlled by a reduction of dosage or the concomitant administration of a barbiturate.

dystonia: These symptoms are rare outside of mental hospitals, but they may be observed occasionally in patients who have received 'Stelazine' as a mild tranquilizer.

Symptoms may include: spasm of the neck muscles, sometimes progressing to torticollis; extensor rigidity of back muscles, sometimes progressing to opisthotonos; carpopedal spasm, trismus, swallowing difficulty, oculogyric crisis and protrusion of the tongue.

The onset of the dystonias may be sudden. A primary characteristic of these symptoms is their intermittency. They may last several minutes, disappear and then recur. There is typically no loss of consciousness and definite prodromata are usually present. Initially, these intermittent symptoms occur in a crescendo of intensity. Then as the effect of the drug wears off, the intervals between the occurrence of symptoms become longer, and the intensity of the symptoms subsides.

Despite their similarity to symptoms of serious neurological disorders, these dystonias are usually promptly reversible and need not cause undue alarm. They usually subside gradually within a few hours, and almost always within 24 to 48 hours, after the drug has been temporarily discontinued. If 'Stelazine' therapy is discontinued, it should be reinstituted at a lower dosage.

Treatment is symptomatic and conservative. In mild cases, reassurance of the patient is often sufficient therapy. Barbiturates are also useful. In moderate cases, barbiturates will usually bring rapid relief. The dosage and route of administration of the barbiturate used should be determined by the intensity of the symptoms and the response of the patient. In more severe adult cases, the administration of an anti-parkinsonism agent (see Physicians' Desk Reference) produces rapid, often dramatic, reversal of symptoms. Also, intravenous caffeine and sodium benzoate seems to be an effective and rapid antagonist to the dystonias. Depending on the severity of the dystonia, suitable supportive measures such as maintaining a clear airway and adequate hydration should be employed. In children, reassurance and barbiturates will usually control symptoms. Dosage and route of administration should be determined according to the intensity of symptoms and response of patient.

Note: It has been reported that injectable administration of 'Benadryl' may also be helpful in controlling dystonias.

pseudo-parkinsonism: These symptoms are extremely rare outside of mental hospitals.

Symptoms include: mask-like facies; drooling; tremors; pill-rolling motion; and shuffling gait.

Reassurance and sedation are important components of effective therapy. In the majority of cases these symptoms are readily reversible when an anti-parkinsonism agent is administered concomitantly with 'Stelazine'. Occasionally it is necessary to lower the dosage or to temporarily discontinue the drug. Depending on the severity of symptoms, suitable supportive measures such as maintaining a clear airway and adequate hydration should be employed. If 'Stelazine' therapy is discontinued, it should be reinstituted at a lower dosage.

CAUTIONS

Clinical experience has demonstrated that 'Stelazine', a phenothiazine derivative, has a wide range of safety and that there is little likelihood of either blood or liver toxicity. The physician should be aware, however, of their possible occurrence.

One of the results of 'Stelazine' therapy may be an increase in mental and physical activity. In some patients, this effect may not be desired. For example, although 'Stelazine' has relieved anxiety and, at the same time, anginal pain in patients with angina pectoris, a few such patients have complained of increased pain while taking 'Stelazine'. Therefore, if 'Stelazine' is used in angina patients, they should be observed carefully and, if an unfavorable response is noted, the drug should be withdrawn.

Hypotension has not been a problem, but nevertheless adequate precautions should be taken when the drug is used in patients with impaired cardiovascular systems.

The antiemetic action of 'Stelazine' may mask signs of overdose of toxic drugs or may obscure the diagnosis of conditions such as intestinal obstruction and brain tumor.

Although 'Stelazine' has shown very little potentiating activity, caution should be observed when it is used in large doses in conjunction with sedatives or depressants.

CONTRAINDICATIONS

'Stelazine' is contraindicated in comatose or greatly depressed states due to central nervous system depressants.

AVAILABLE

Tablets, 1 mg. and 2 mg., in bottles of 50, 500 and 5000. (Each tablet contains 1 mg. or 2 mg. of trifluoperazine as the dihydrochloride.)

For psychiatric patients who are hospitalized or under close supervision:

Tablets, 5 mg. and 10 mg., in bottles of 50, 1500 and 5000. (Each tablet contains 5 mg. or 10 mg. of trifluoperazine as the dihydrochloride.)

Multiple-dose Vials, 10 cc. (2 mg./cc.), in boxes of 1 and 20. (Each cc. contains, in aqueous solution, 2 mg. of trifluoperazine as the dihydrochloride, 4.75 mg. of sodium tartrate, 11.6 mg. of sodium biphosphate, 0.3 mg. of sodium saccharin, and 0.75% of benzyl alcohol as preservative.)

Concentrate (for hospital use), 10 mg./cc., in 2 fl. oz. bottles, in cartons of 4 and 12. (Each cc. contains 10 mg. of trifluoperazine as the dihydrochloride.)

Prescribing information adopted July 1961

PARNATE®
brand of tranylcypromine

PRESCRIBING INFORMATION

The physician should be familiar with the material on dosage, side effects and cautions given below before prescribing 'Parnate', and with the principles of monoamine

oxidase inhibitor therapy and the side effects of this class of drugs as reported in the literature. Also, the physician should be familiar with the symptomatology of mental depressions and alternative methods of treatment to aid in the careful selection of patients for 'Parnate' therapy.

INDICATIONS AND LIMITATIONS OF USE

'Parnate' is indicated for the relief of symptoms of mental depression which may include dejected mood, self-depreciation, lowered activity levels, difficulty in making decisions, disturbed eating and sleeping patterns, and variations of these basic symptoms as described in the literature. The therapeutic utility of monoamine oxidase inhibitors is limited specifically to depressive symptoms; these drugs may aggravate some co-existing symptoms such as agitation or anxiety.

In psychiatry, 'Parnate' is indicated in the following diagnostic categories, subject to the limitation stated above: reactive and other psychoneurotic depressions, involuntional melancholia, depressive phase of manic-depressive psychosis, psychotic depressive reactions. In the psychiatric treatment of severe endogenous depressions, it is impossible to predict, with presently known data, which patients will respond best to 'Parnate' and which to ECT. 'Parnate' may be indicated in some reactive depressions in which ECT is not indicated. 'Parnate' is not recommended to treat essentially normal responses to temporary situational difficulties.

Note: In depressed patients, the possibility of suicide should always be considered and adequate precautions taken. Exclusive reliance on drug therapy to prevent suicidal attempts is unwarranted, as there may be a delay in the onset of therapeutic effect or an increase in anxiety and agitation. Also, of course, some patients fail to respond to drug therapy.

CLINICAL EXPERIENCE

Extensive clinical trials with 'Parnate' have confirmed its effectiveness and versatility. As always in the evaluation of drugs for psychic disorders, some variation in efficacy has been reported.

These studies provide the following data on the effectiveness and fundamental properties of 'Parnate':

1. In 500 patients on whom complete data are available for statistical analysis, marked or moderate improvement was reported in 77% of the nonpsychotic patients. Marked improvement was reported in 40% and moderate improvement in 27% of the psychotic patients. Some investigators have pointed out that improvement in certain instances, particularly in milder cases, may have been due to spontaneous remission of symptoms.
2. Improvement is seen within 48 hours to three weeks after starting 'Parnate'; the response can be accelerated by using higher than standard initial dosages.
3. 'Parnate' acts primarily as an antidepressant rather than as a euphoriant. Patients feel essentially normal on 'Parnate' therapy.
4. 'Parnate' can facilitate psychotherapy by increasing the patient's willingness to exert mental effort and reducing symptom-centered preoccupations.
5. 'Parnate' appears to prevent relapses in some patients who have been treated initially with ECT.

DOSAGE

Dosage should be adjusted to the requirements of the individual patient. Dosage increases should be made only in increments of 10 mg. per day and ordinarily at intervals of one to three weeks. Side effects occur more often as dosage is increased.

Reduction from peak to maintenance dosage may be desirable before withdrawal. If withdrawn prematurely, original symptoms will recur. No tendency to produce rebound depressions of greater intensity has been seen with 'Parnate', although this is a theoretical possibility in patients treated at high dosages. Experimental work indicates that inhibition of monoamine

oxidase persists for only a few days after withdrawal. Thus, any side effects due to this inhibition will probably recede rapidly upon withdrawal, which should be a distinct advantage of 'Parnate' therapy when the patient exhibits poor tolerance to antidepressant medication.

Because there is a striking relationship between dosage and speed of response, two dosage schedules are provided:

A. Standard dosage. (This schedule will not always produce prompt results, but it will hold the incidence of side effects to a minimum.)

1. Recommended starting dosage is 20 mg. per day - administered 10 mg. b.i.d. (morning and afternoon).
2. Continue this dosage for two to three weeks.
3. If no signs of a response appear, increase dosage to 30 mg. daily—20 mg. upon arising and 10 mg. in the afternoon.
4. Continue this dosage for at least a week.
5. As soon as a satisfactory response is obtained, dosage may usually be reduced to a maintenance level.
6. Some patients will be maintained on 20 mg. per day; many will need only 10 mg. daily.
7. If dosages above 30 mg. daily are desired for use in exceptionally resistant cases, refer to the schedule of intensive dosage.

B. Intensive dosage (for accelerated response). (This schedule is for use in hospitalized patients or those under comparable supervision whenever a prompt effect is more desirable than a relative absence of side effects.)

1. Recommended starting dosage is 30 mg. per day. Administer 20 mg. in the morning and 10 mg. in the afternoon.
2. Continue this dosage for one week.
3. If no signs of a response appear, increase dosage gradually at intervals of several days to one week.
4. Dosages above 60 mg. per day are not advisable.
5. As soon as a satisfactory response is obtained, dosage may usually be reduced gradually to a maintenance level.
6. Some patients may be maintained on 20 mg. per day; many will need only 10 mg. daily.

Note: When ECT is being administered concurrently, 10 mg. b.i.d. can usually be given during the series, then reduced to 10 mg. daily for maintenance therapy.

SIDE EFFECTS

A. At standard dosages. Side effects in patients treated with standard doses of 'Parnate' are qualitatively the same as seen at higher dosages but are generally less frequent and less severe.

The patient may experience restlessness, overstimulation, or insomnia; may notice some weakness, drowsiness, episodes of dizziness, or dry mouth; or may report nausea, diarrhea, abdominal pain, or constipation. Occasionally, headaches have occurred. Symptoms of postural hypotension have been seen most commonly, but not exclusively, in patients with pre-existent hypertension; blood pressure returns to pretreatment levels rapidly upon discontinuation of the drug. Other side effects which might occur in rare instances are tachycardia, urinary retention, significant anorexia, skin rashes, edema, palpitations, blurred vision, tinnitus, chills, paresthesia, muscle spasm and tremors, impotence, sweating and possibly paradoxical hypertension.

Most of these side effects can usually be relieved by lowering the dosage or by giving suitable concomitant medication.

B. At intensive treatment dosages. When 'Parnate' is used for intensive treatment to control symptoms more rapidly, an increase in the incidence and severity of side effects must be anticipated.

At doses above 30 mg. daily, postural hypotension is a major side effect of 'Parnate' therapy. It affects largely the systolic readings and occurs mainly, but not exclusively, in patients

with a history of hypertension. Rare instances of syncope have been seen. Dosage increases should be made more gradually in patients showing a tendency toward hypotension at the starting dose. Postural hypotension can be relieved by having the patient lie down until blood pressure returns to normal.

Other side effects which may occur are listed above under *standard dosages*. Headaches have occasionally been severe and incapacitating. Overstimulated behavior, which may include increased anxiety, agitation and manic symptoms, can be evidence of either a side effect or an excessive therapeutic action; if this occurs, reduce dosage or administer a phenothiazine tranquilizer.

CAUTIONS

Extensive clinical and laboratory work has shown that there is little likelihood of blood or liver toxicity. Since 'Parnate' is a non-hydrizine compound, it should prove to be exempt from the toxic effects on the liver thought to be due to the hydrizine moiety of some other drugs. However, severe toxic reactions have occurred with some monoamine oxidase inhibitors. Pending further clinical experience, 'Parnate' should probably not be used in patients with a history of liver disease or in those with abnormal liver function tests. Drug-induced jaundice is often difficult to differentiate from other jaundice. However, there has been sufficient clinical experience with 'Parnate' to demonstrate that, if it has any potentiality for producing jaundice, the reaction must be rare. Also, the usual precautions should be observed in patients with impaired renal function since there is a possibility of accumulative effects in such patients.

Although 'Parnate' has been used in combination with various drugs (particularly Stelazine®, brand of trifluoperazine), some monoamine oxidase inhibitors have been reported to have marked potentiating effects on certain drugs, e.g., sympathomimetics, central nervous system depressants, hypotensive agents and alcohol. Therefore, the physician should bear in mind the possibility of a lowered margin of safety when 'Parnate' is combined with potent drugs and should adjust dosage carefully. 'Parnate' should not be used in combination with imipramine. (The reaction of a patient who attempted suicide with a deliberate overdose of 'Parnate' and imipramine was more severe than would have been predicted from the properties of either drug.)

CASES REQUIRING SPECIAL CONSIDERATION

Administer with caution to patients with recent myocardial infarction or coronary artery disease with angina of effort. Increased physical activity and, more rarely, hypotension have been reported. The pharmacologic properties of 'Parnate' suggest that it may have a capacity to suppress anginal pain that would otherwise serve as a warning sign of myocardial ischemia. When 'Parnate', like any agent which lowers blood pressure, is withdrawn from patients who tend to be hypertensive, blood pressure may again rise to undesirable levels.

When 'Parnate' is combined with a phenothiazine derivative or other compound known to affect blood pressure, elderly patients and those with cardiovascular inadequacies should be observed more closely because of the possibility of additive hypotensive effects.

In patients being transferred to 'Parnate' from another monoamine oxidase inhibitor or from imipramine, allow a medication-free interval of one week, then initiate 'Parnate' using half the normal dosage for at least the first week of therapy. Similarly, a few days should elapse between the discontinuance of 'Parnate' and the administration of another monoamine oxidase inhibitor or of imipramine.

Because the influence of 'Parnate' on the convulsive threshold is variable in animal experiments, suitable precautions should be taken if epileptic patients are treated.

AVAILABLE

Tablets, 10 mg., in bottles of 50 and 1500. (Each tablet contains 10 mg. of translycypromine, as the sulfate.)

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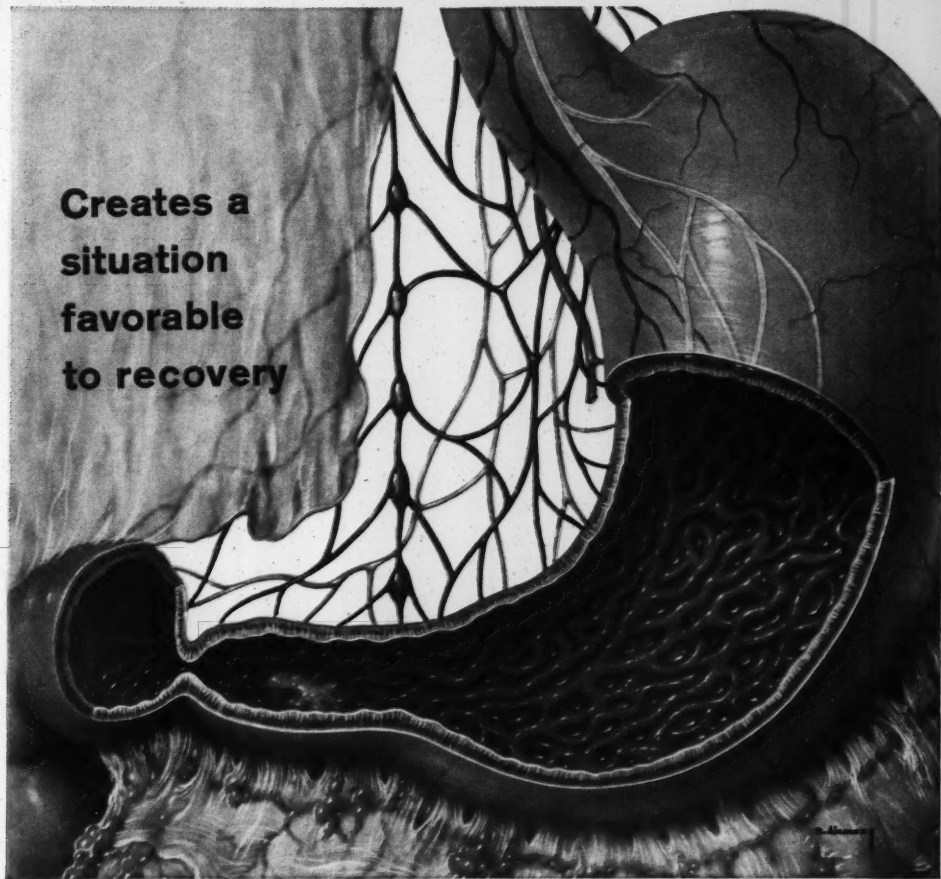
CONSULTANT

Smith Kline & French Laboratories

1500 Spring Garden Street

Philadelphia 1, Pennsylvania

**Creates a
situation
favorable
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In Pylorospasm: 'Combid' *Spansule* capsules provide relief of psychic as well as physical factors. The anxiety, tension and apprehension that cause or complicate pyloroduodenal irritability are controlled. At the same time, the spasm itself is reduced. 'Combid' relieves irritability and hypermotility for 10 to 12 hours (all day or all night) after one dose.



Combid® Spansule®
brand of sustained release capsules

'Combid' *Spansule* capsules are a logical combination of 5 mg. of Darbid® (brand of isopropamide) as the iodide, a unique, inherently long-acting anticholinergic; and 10 mg. of Compazine® (brand of prochlorperazine) as the dimaleate, the outstanding tranquilizer/antiemetic in sustained release form.

Among the many conditions in which 'Combid' *Spansule* capsules are indicated are: peptic ulcer, hyperchlorhydria, pyloroduodenal irritability, irritable or spastic colon, gastric neurosis, gastritis, aerophagia, pyrosis, "nervous stomach," functional diarrhea, drug-induced diarrhea, mucous colitis, ulcerative colitis, genitourinary spasm, and nausea and vomiting of pregnancy.

DOSAGE: One 'Combid' *Spansule* capsule b.i.d. (every 12 hours). Some patients may require only one capsule every 24 hours, on arising. Only in the exceptional patient will it be necessary to increase the dosage to two capsules b.i.d. (morning and evening).

CAUTIONS AND CONTRAINDICATIONS: As is true with any preparation containing an anticholinergic, 'Combid' *Spansule* capsules should not be prescribed for patients with glaucoma, pyloric obstruction, or prostatic hypertrophy. Also, because of the antiemetic action of the 'Compazine' component (a phenothiazine derivative), 'Combid' *Spansule* capsules should not be used where nausea and vomiting are believed to be a manifestation of intestinal obstruction or brain tumor.

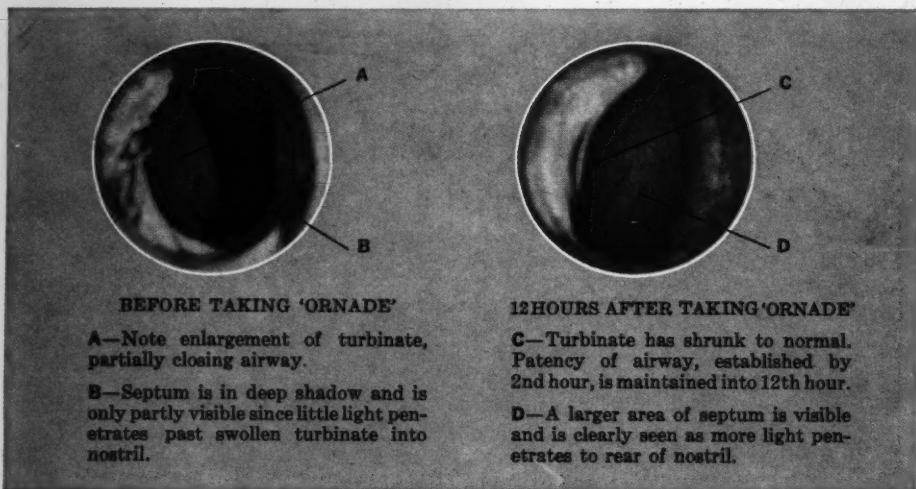
Clinical experience has demonstrated that 'Combid' has a wide margin of safety and that there is little likelihood of blood or liver toxicity or neuromuscular reactions (extrapyramidal symptoms). The physician should be aware, however, of their possible occurrence. When 'Combid' is used with depressant drugs, the possibility of an additive effect should be borne in mind. An occasional patient may experience mild drowsiness when first taking 'Combid'.

Prescribing information adopted January, 1961.

24-hour relief of running nose, sneezing and nasal stuffiness of "colds" with **ONE ORNADE® SPANSULE® q12h**

brand of sustained release capsules

the unique oral nasal decongestant with a special drying agent



BEFORE TAKING 'ORNADE'

A—Note enlargement of turbinate, partially closing airway.

B—Septum is in deep shadow and is only partly visible since little light penetrates past swollen turbinate into nostril.

12 HOURS AFTER TAKING 'ORNADE'

C—Turbinate has shrunk to normal. Patency of airway, established by 2nd hour, is maintained into 12th hour.

D—A larger area of septum is visible and is clearly seen as more light penetrates to rear of nostril.

PRESCRIBING INFORMATION

The comprehensive formula of 'Ornade' Spansule capsules contains a special drying agent, isopropamide iodide, in addition to a decongestant and an antihistamine. Isopropamide iodide acts to reduce excessive weeping and nasal and paranasal secretions. The decongestant, phenylpropanolamine, reduces vascular engorgement and often permits blocked sinus cavities to drain. The antihistamine, 'Teldrin', reduces sneezing, rhinorrhea and itching of the eyes. Acting together, additively, these three agents combine to provide outstanding relief from upper respiratory distress.

FORMULA: Each 'Ornade' Spansule sustained release capsule contains 8 mg. of Teldrin® (brand of chlorpheniramine maleate) and 50 mg. of phenylpropanolamine hydrochloride, so prepared that a therapeutic dose is released promptly and the remaining medication, released gradually and without interruption, sustains the effect for 10 to 12 hours; and 2.5 mg. of isopropamide, as the iodide. Because isopropamide iodide is inherently long-acting, it has not been necessary to put it into sustained release form; therefore, the entire dose of isopropamide iodide is released upon ingestion.

INDICATIONS: 'Ornade' Spansule capsules are

recommended for prompt and prolonged relief from respiratory tract congestion and hypersecretion associated with: the common cold, acute, subacute and chronic sinusitis, influenza, vasomotor rhinitis, postnasal drip, allergic rhinitis; hay fever, "rose fever," etc.

DOSAGE (adults and children over 6): For all-day, all-night relief, one 'Ornade' Spansule capsule q12h. When taken at bedtime, 'Ornade' keeps patients symptom-free throughout the night and usually enables them to wake up in the morning uncongested and with airways free.

SIDE EFFECTS: Drowsiness, "nervousness" or insomnia may occur on rare occasions, but are usually mild and transitory.

CAUTIONS AND CONTRAINDICATIONS: Use with caution in the presence of severe hypertension. 'Ornade' should not be used in patients with glaucoma or prostatic hypertrophy. **NOTE:** The iodine in isopropamide iodide may alter FBI test results and will suppress I¹³¹ uptake.

SUPPLIED: In bottles of 30 capsules.

Prescribing information adopted January, 1961



Smith Kline & French Laboratories

